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IN THE

# Supreme Court of the United States

OCTOBER TERM, 1966

No. 1044

JOHN C. KRANTZ, JR. and LOUISE SPEERS CROIX,
*Petitioners,*

v.

JOHN F. OLIN, *Respondent.*

## PETITION FOR A WRIT OF CERTIORARI to the United States Court of Customs and Patent Appeals

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## INDEX


| | Page |
|---|---|
| Citations to Opinions Below | 1 |
| Jurisdiction | 2 |
| Questions Presented | 2 |
| Constitutional and Statutory Provisions Involved | 3 |
| Statement | 4 |
| Reasons for Granting the Writ | 12 |

APPENDIX:

| | |
|---|---|
| Constitution and Statutes | 1a |
| Decision of Court of Customs and Patent Appeals | 3a |
| Decision of Board of Patent Interferences | 17a |
| Order of Court of Customs and Patent Appeals | 26a |
| Petition of Krantz and Croix for Rehearing | 27a |


## CITATIONS

CASES:


Application of Manson, 333 F. 2d 234 (C.C.P.A. 1964) 14
Brenner v. Manson, 383 U.S. 519 (1966) ..... 2, 5, 11, 12, 13, 14, 15


STATUTES:


United States Constitution, Art. I § 8 ..... 3
28 U.S.C. § 1256 ..... 2
35 U.S.C. § 100 ..... 3
35 U.S.C. § 101 ..... 3, 13
35 U.S.C. § 102(g) ..... 3
35 U.S.C. § 112 ..... 3


MISCELLANEOUS:


1966 Summary of Proceedings, Section of Patent Trademark and copyright law, American Bar Association ..... 13, 14

Report of President's Commission on the Patent System (1966) ..... 3, 12

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Petitioners pray that a writ of certiorari issue to review the judgment of the United States Court of Customs and Patent Appeals, entered in the above-entitled case on March 10, 1966.

### CITATIONS TO OPINIONS BELOW

The decision of the Board of Patent Interferences (R. 1, T. 225-233)* is unreported and is printed in the

* Citations to the Record in the form "R. 1" refer to the pages as numbered by the Clerk of the Court of Customs and Patent Appeals in the certified record filed herewith. That record includes the printed "Transcript of Record" before the court below numbered in its entirety as "page 1". References to pages within the Transcript are in the form, "T. 1".

Appendix hereto, *infra,* pp. 17a-26a. Petition for reconsideration was denied December 11, 1963 (R. 1, T. 250-251).

The opinions of the United States Court of Customs and Patent Appeals (R. 3-20) are reported at 356 F. 2d 1016. These opinions are printed in the Appendix hereto, *infra,* pp. 3a-16a.

## JURISDICTION

The judgment of the Court of Customs and Patent Appeals (R. 21, Appendix, p. 26a, *infra*) was entered on March 10, 1966. The decision of this Court in *Brenner* v. *Manson,* 383 U.S. 519 (1966) was announced eleven days *later*. A timely petition for rehearing * asserting the newly controlling effect of the *Manson* case was filed on May 3, 1966. This petition was denied by the Court of Customs and Patent Appeals on November 10, 1966 (R. 22).

The jurisdiction of this Court is invoked under 28 U.S.C. § 1256.

## QUESTION PRESENTED

### Background

This is a patent interference proceeding in which petitioners claim to be the first to make a patentable invention of:

> A process for reacting *A* with *B* to produce new product *C*.

The prior art neither states nor implies any practical usefulness for the product *C*. The respondent did not

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* This petition is reprinted in its entirety in the Appendix hereto, *infra,* pp. 27a-41a.

discover any practical usefulness for the product *C*. The respondent's application to patent the process did not state any practical usefulness for the product *C*, but instead:

> 1. Alleged sham utilities of no practical value, akin to a claim of utility as a paperweight for a new product that happened to be heavy; and
>
> 2. Wilfully omitted to disclose a toxic property which showed that the sham utilities would have no practical application in the arts.

The petitioners did discover a substantial and unobvious practical utility for the product *C*. Petitioner's application to patent the process fully disclosed the practical utility they had discovered.

## THE QUESTIONS

I. Can the utility which is essential to make an invention patentable be supplied solely by sham recitation of a spurious utility for which the invention is practically useless?

II. Has an applicant for patent, who withholds from his application information essential for the safe use of the invention for the purpose recited in the application, made a sufficient disclosure to the patent office to form the basis of a complete and allowable application on which a valid patent can issue?

## CONSTITUTIONAL AND STATUTORY PROVISIONS INVOLVED

The constitutional provision involved is U.S. Const., Art. I, § 8. The statutory provisions involved are Title 35, United States Code, §§ 100, 101, 102(g), and 112. They are printed in the Appendix hereto, *infra*, pp. 1a-2a.

## STATEMENT

### Summary Statement

In 1955 each of the parties was conducting research to find fluoro compounds that would provide safe, new non-flammable general anesthetics. Within months of each other that year, both Petitioners and Respondent had synthesized the new compound of the process here involved. Animal tests by each party showed that the compound was useless—indeed wholly unsafe—for the hoped-for anesthetic use.

Respondent then stopped all research work and turned to the Patent Office, filing an application claiming the new chemical process and the new compound. Obviously believing that some showing of utility was required, Respondent adopted the technique (believed to be fairly common in patent practice) of attempting to meet the statutory requirement for a showing of utility by incorporating in the application purely speculative utilities presented in the guise of fact. Actually Respondent never tested or otherwise proved the operativeness or practicability of the utilities so alleged.*

The only *evidence* in the record concerning the operability and practicability of the utilities alleged by Olin is that of Petitioners' experts who testified that the utilities alleged are *not* practical (R. 1, T. 180, 186).

Petitioners, on the other hand, continued and expanded their research work after the initial failure and in due course discovered a different and unexpected drug use for the new compound. This later was

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* See Olin's testimony (R. 1, T. 173-175), Appendix, *infra*, pp. 37a-39a, reprinted from the Petition for Rehearing in the court below.

approved both for safety and effectiveness by the Federal Food and Drug Administration and now forms the basis for the drug INDOKLON sold commercially for the treatment of mental disease by the Ohio Chemical and Surgical Equipment Co. division of Petitioners' assignee, the Air Reduction Company, Incorporated.

Although Petitioners' research work was successful, they now find that the Patent Office, with the approval of the Court of Customs and Patent Appeals, proposes to issue to Respondent a patent which would dominate and control Petitioners' new drug INDOKLON. Such result would in Petitioner's opinion be contrary to and in conflict with the holding of this Court in *Brenner* v. *Manson, supra.*

**Detailed Statement**

The invention which is the subject of the controversy was made in the following way.

Ohio Chemical and Surgical Equipment Company, medical division of Air Reduction, began research work in 1950 the objective of which was a new and improved fluorinated general anesthetic. The research program adopted for this purpose involved the synthesis, animal screening, and clinical testing of a large number of fluorinated compounds.

Some of the fluorinated compounds so synthesized and tested showed anesthetic properties. Others of the fluorinated compounds so synthesized and tested were found useless as anesthetics. The new compound involved in the present controversy, hexafluorodiethyl ether, fell in this category. When screened on mice it was found to produce not a pleasant, relaxed and deep sleep, but violent convulsions, even in extremely low concentrations.

This discovery by Petitioners, of the *non*-utility for the intended anesthetic use of the new compound produced by the chemical process in issue was made in January 1956 when Petitioners first screened the new compound on mice, only to find that it caused violent convulsions rather than a deep relaxed sleep (R. 1, T 148; Krantz et al. Exhibit 3 entitled "Ohio Report" 109-1956).

Petitioners had first synthesized the new compound and identified it chemically on November 30, 1955 (R. 1, T 147), just prior to their testing of the same as a possible new anesthetic in January 1956 as referred to above.

As later appeared during the course of the patent interference proceeding which forms the basis of the present controversy, Respondent had separately and independently synthesized and tested the same new compound for the same intended utility (i.e., as a general anesthetic). And the result of the test was equally unsuccessful; Respondent also noted that the compound produced convulsions in the test animals (mice). Respondent first synthesized and identified the new compound on July 28, 1955 (R. 1, T 147) four months prior to its synthesis by Petitioners.

Thereafter, however, the courses of action taken by the respective parties differed greatly. This difference insofar as the ultimate result of the research work is concerned was the difference between failure and success.

Respondent's investigator Latven, who had tested Respondent's new compound on mice for anesthetic properties, found that it would not be useful as an anesthetic and concluded that it was highly toxic and

dangerous to humans. Upon noting the violent convulsions produced in mice by low concentrations of the new compound, Latven reported immediately by phone (R. 1, T 163-XQ 13) and later by letter (R. 1, 163; Olin Exhibit P) [Appendix hereto, *infra,* pp. 42a-43a] to Respondent as follows:

> "That it is apparent that this compound is extremely toxic and is absorbed systemically within seconds following inhalation. WE URGE YOU TO TAKE EVERY PRECAUTION IN HANDLING THIS MATERIAL AND TO AVOID ACCIDENTAL INHALATION AT ALL COSTS. You can imagine what might happen if the glass container were accidentally dropped and broken on the laboratory floor."

Respondent thereupon discontinued all work directed toward determining the usefulness of the new compound (R. 1, T 149—stipulations III and IV).

It seems obvious that this was as a result of the Latven tests, showing the non-utility of the new compound as an anesthetic.

Respondent then turned to the filing of a patent application, including therein the new synthesis or process for making the new compound and the new compound itself but excluding therefrom any disclosure of or reference to the results of the tests that had been made by Latven on mice, and, specifically, withholding the information previously reported by Latven to the effect that the new compound was "extremely toxic and is absorbed systemically within seconds following inhalation" (R. 1, T 188-Q3).

Not having available any tested or proved utility for the new compound, and presumably believing that some showing of utility should be included in the patent

application, Respondent included in the application the following untested and unproved disclosures or allegations of utility (R. 1, T 149 Stipulation III):

> "The resulting new chemical compound of my invention, bis (2,2,2-trifluoroethyl) ether, is a colorless liquid which vaporizes readily at ordinary temperatures and has useful solvent properties. For example, it may be used to prepare pastes or dispersions of high molecular weight fluorine compounds such as fluorocarbon waxes. It also may be used to soften or solubilize polymeric materials, e.g., synthetic fibers. It is chemically reactive and may be used in the preparation of other fluorinated compounds" (R. 1, T 11).

As the record shows (R. 1, T 149) the Respondent had not either as of the time of filing of the Olin application on December 29, 1955 or subsequently, tested or proved these allegations of utility in any way. They were in truth mere speculations not so characterized. As presented in the Olin application they were no more than shams or spurious uses, offered as a "makeweight" in what now clearly appears in the light of Olin's testimony in the interference proceeding to have been no more than speculations offered in the guise of fact to fill in the void created by the failure of Olin's new compound for the only use for which it was tested by Respondent, i.e. as a new anesthetic.

Petitioners on the other hand, upon the failure of their new compound to qualify as a new anesthetic did *not* stop their research work and turn to the Patent Office as did Olin. Rather they recognized that even though their new compound was useless as an anesthetic, it might have some other practical use. They surmised that it might be useful in the treatment of mental disease in humans, for purposes somewhat simi-

lar to the dread electroshock treatment previously used for such purpose.

To that end Petitioners continued research work and carried out extensive, difficult and expensive clinical and chemical investigations. They were successful (R. 1, T 150-154). They found that their new compound was in fact better in many respects for the treatment of mental disease than was electroshock therapy, and they proved that it could be safely and effectively used for such purpose. In due course the new drug, after being given Federal Food and Drug Administration approval, was marketed by the Ohio Chemical and Medical Equipment Division of Petitioners' assignee, the Air Reduction Company, Incorporated.

Petitioners filed their application for patent on May 7, 1957 only after they had proved by clinical tests the practical utility for the new compound as a new drug for the treatment of mental disease. By then, of course, the Olin application with its sham and spurious disclosure of speculative utilities presented in factual form, had already been on file in the Patent Office for 16 months.

The record in this case is very clear that Respondent did nothing of a research or commercial nature following their unsuccessful tests of the new compound as a possible new general anesthetic for humans. (R. 1, T 156 Par C & D) Rather he abandoned experimental or developmental work in favor of an attempt to secure a patent monopoly on the new compound both in terms of process and composition claims. Such claims, if allowed and issued in a U.S. patent, would dominate and therefore enable Respondent to exclude, or charge royalties for, any and all commercial use of the new compound for the only practical and substantial utility known; the new drug utility as discovered by Petitioners.

The present controversy arose on August 4, 1960, when the Patent Office suggested to Respondent Olin for inclusion in his parent application Serial No. 556,056, filed December 29, 1955 (R. 1, T 137), a chemical process claim that had previously been allowed to Petitioners Krantz and Croix in their U.S. patent application S.N. 657,482 filed May 7, 1957. Respondent having "made" the claim so suggested, in its U.S. continuation patent application, Serial No. 37035, filed June 20, 1960 the Patent Office proceeded to establish the interference and to carry out the usual proceedings intended to determine priority of inventorship as between the two interfering applications of Petitioners and Respondent.

The Board of Patent Interferences after considering stipulated testimony and other evidence submitted by the two parties awarded priority of the chemical process claim in issue to Respondent. Such award was based *solely* on the holding that the filing of Respondent's parent patent application on December 29, 1955 constituted a constructive reduction to practice of the intention in issue, as of the filing date of said application. It was expressly held, and Respondent ever since has accepted such ruling, that Respondent had never *actually* reduced the invention in issue to practice.

Therefore, the issue in the interference became simply one of whether or not Respondent in filing his patent application, had thereby constructively reduced the invention in issue to practice. If so, Respondent should be awarded priority of invention on the basis of his earlier filing date. If not, Petitioners should be awarded priority of invention because Respondent would in that case be in the position of never having completed the invention.

Petitioners contended throughout the course of the Patent Office proceedings and the subsequent appeal to the Court of Customs and Patent Appeals that the disclosure of utility in the Olin application, considering not only what was stated in such disclosure but also what was withheld therefrom, was so misleading and insufficient as to make the Olin application fatally defective and therefore not as a matter of law a constructive reduction to practice of the invention in issue.

During the course of the subsequent proceedings before the Court of Customs and Patent Appeals, Respondent relied on the ruling of that Court in the Manson case (prior to its reversal by the Supreme Court) with respect to showings of utility for a new compound produced by a new chemical process, when the claim in issue was a claim to the process; namely, that *no* showing of utility was required. Respondent took the position that the allegations of utility he had included in his application were mere surplusage and therefore it made little or no difference from the legal point of view whether they were right or wrong, sufficient or insufficient.

Petitioners on the other hand contended that even if the decision of the Court of Custom and Patent Appeals in *Manson* were considered to be correct (and this was not admitted), and that *no* showing of utility was required, still it was incumbent upon Respondent once he elected to include a recitation of alleged utility to make a full and accurate disclosure, and *not* to withhold information which not only would be essential to the proper determination by the Patent Examiner as to whether such alleged utility was practical but also essential to the safe use of the new compound by one who wished to use it for the purpose alleged.

The lower court ruled against Petitioners but it did so in the context of Respondent's reliance on the prior C.C.P.A. decision in the *Manson* case, prior to the reversal thereof by this Court. Therefore it is clear that this case was argued and decided in the court below on the basis of the wrong "ground rules". Petitioners following the decision of this Court in the *Manson* case attempted to have this cause reheard or reconsidered by the lower court on the basis of what they considered to be the right "ground rules" (Petition for Rehearing, Appendix hereto, *infra*, pp. 27a-41a) but this petition was denied.

## REASONS FOR GRANTING THE WRIT

### Public Interest

This petition should be granted in the interest of the United States patent system, for the purpose of strengthening the integrity of the system and enabling those who rely on the patent disclosures it elicits to do so with confidence and without fear of being misled.

It should be granted in the interest of all those in the United States, and in fact the entire world, who utilize in the course of research and development work the results of prior investigators and inventors as reported in their patent disclosures.

One of the primary objectives of the patent system is to elicit from inventors early public disclosures of the results of their work.* Unless this Court acts to termi-

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*Report of the President's Commission on the patent system, 1966, page 3:

> "Third, by affording protection, a patent system encourages early public disclosure of technological information, some of which might otherwise be kept secret. Early disclosure reduces the likelihood of duplication of effort by others and provides a basis for further advances in the technology involved."

nate at once the practice sometimes followed in the patent profession of reciting "spurious" uses in patent applications, for the purpose of complying with the utility requirement of 35 U.S.C. § 101, such practice beyond any doubt will be widely adopted and expanded. The result will be that patent disclosures will become untrustworthy and misleading as the sources of accurate technical information which the Patent Office seeks to make them. The issue presented by this petition is therefore not simply one of doing justice to petitioners by requiring the court below to apply to their case the law of the *Manson* case announced by this Court after their case was argued; rather it involves the "guts" of the patent system itself, the means by which the public in return for the private patent grant is to be assured that the patent disclosure to be published for the benefit of all shall be full, accurate and reliable as a source of information about the invention.

Although the decision of this Court in the *Manson* case is less than a year old, it has already been suggested that the results of the decision may not be so difficult to overcome. Thus, in a regular, open meeting of the Patent, Trademark and Copyright Section of the American Bar Association, held at Montreal, Canada in August 1966, it was said:

> "The results of the *Manson* decision may not be so difficult to overcome since almost any recitation of utility should be enough to satisfy Section 101. I suppose the attorney drafting the application could include some possible or probable use for the resultant product even though such use was in some respects merely imaginative or speculatory. If it is colored, he might characterize it as a dyestuff; if it is in film form, he might characterize it as a film; if it is a liquid, characterize it as a wetting agent; if it kills insects, he might call it an insecticide; if it is an intermediate for another compound, that can be stated".

This quotation is taken from pages 94 and 95 of the printed publication entitled "1966 Summary of Proceedings, Section of Patent, Trademark and Copyright Law, American Bar Association."

Unless this Court now disapproves the practice of asserting "sham" or "spurious" utilities for the purpose of nominal compliance with the utility requirement of Section 101 of the patent statutes, the decision of this Court in the *Manson* case, holding that practical utility is an essential requirement of patentable invention, will be in effect be nullified and overcome.

If the lower Court decision is allowed to stand it would seem inevitable that future applicants for patents on new compounds and processes for making the same would not first have to find a practical utility for their invention as petitioners believe required by *Manson*. Instead they would need only to list in the patent application tens or hundreds of "imaginative or speculatory" uses. According to the decision of the lower court in the present case the utility requirement for patentability will be met if only one of these tens or hundreds of spurious uses is later found to be partially operative even though impractical. But the resultant patent would be highly misleading and petitioners contend this Court's decision in *Manson* would be frustrated.

**Mistake in Law**

This petition should be granted for the purpose of correcting a mistake in law.

At the time of argument and decision of this case in the lower court, the *Manson* case as decided by the Court of Customs and Patent Appeals * (prior to its

* *Application of Manson*, 333 F. 2d 234 (C.C.P.A. 1964).

reversal by this Court) was deemed to be controlling law. Respondent was in the position of being able to contend that utility was *not* a requirement for patentable invention in the case of a claim to a process for making a new compound. Thus Olin stated, in his brief before the lower court:

> "The statements of this Court [the C.C.P.A.] in the case of In re Manson make it clear beyond question that whatever may have been the case previously, it is no longer required by this Court that a patent specification describe uses for the product of a claimed method in order to support properly claims to the method.
>
> "Since appellant's challenge to the adequacy of the Olin application is based solely on the statements in the Olin application directed to the uses for the compound produced by the claimed method, and since no such statements are required, appellant's challenge must fail on this ground alone. Appellant's challenge is directed not to a requirement going vitally to the adequacy of the application but rather to a gratuitous statement that could have been entirely omitted without affecting in the least the adequacy of the application to support the method claim in contest."

Obviously, the argument and decision of this cause upon the understanding that the law required *no* disclosure of utility for the new compound produced by the process claim in issue could, and undoubtedly did, affect the view taken by the lower court of the sufficiency of the utility allegations in the Olin application.

Petitioners believe it clear that the lower court tried and decided this case upon the basis that no disclosure of utility was necessary to the patentability of the process claim in issue. Eleven days later this

Court decided in the *Manson* case that a practical utility was essential to the patentability of such a process claim. Therefore the lower court should, in the light of this Court's decision in the *Manson* case, at the very least have reheard this cause. Having refused to do so, by denial of Petitioners' request for rehearing, Petitioners' only recourse to correct this mistake is to induce this Court to consider and determine the cause in order that the ultimate decision will be in accord with the correct legal principles as laid down by this Court in the *Manson* case.

## CONCLUSION

For the foregoing reasons, this petition for a writ of certiorari should be grounded.

Respectfully submitted,

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and
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Meleord F. Tietze,
*Of Counsel.*

February 6, 1967

# APPENDIX I

## The Constitutional Provision

ART. 1, SEC. 8. The Congress shall have power . . . To promote the progress of science and *useful arts,* by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries. [Emphasis added.]

## The Statutory Provisions

Title 35 United States Code—

§ 100. *Definitions*

When used in this title unless the context otherwise indicates—

(a) The term "invention" means invention or discovery.

(b) The term "process" means process, art or method, and includes a *new use* of a known process, machine, manufacture, composition of matter, or material.

(c) The terms "United States" and "this country" mean the United States of America, its territories and possessions.

(d) The word "patentee" includes not only the patentee to whom the patent was issued but also the successors in title to the patentee. July 19, 1952, c. 950 § 1, 66 Stat. 797. [Emphasis added.]

§ 101. *Inventions patentable*

Whoever invents or discovers any new and *useful process,* machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title. July 19, 1952, c. 950, § 1, 66 Stat. 797. [Emphasis added.]

§ 102. *Conditions for patentability; novelty and loss of right to patent*

A person shall be entitled to a patent unless—

• • •

(g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other. July 19, 1952, c. 950, § 1, 66 Stat. 797.

§ 112. *Specification*

The specification shall contain a written description of the invention, and of the manner and *process of* making and *using it,* in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, *to* make and *use the same,* and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof. July 19, 1952, c. 950, § 1, 66 Stat. 798. [Emphasis added.]

## APPENDIX II

### Opinion

UNITED STATES COURT OF CUSTOMS AND PATENT APPEALS

OCTOBER TERM, 1965

Interference No. 91,447

Patent Appeal No. 7415

JOHN C. KRANTZ, JR. and LOUISE SPEERS CROIX, *Appellants,*

v.

JOHN F. OLIN, *Appellee.*

March 10, 1966

RICH, Judge.

This appeal is from the decision of the Board of Patent Interferences awarding priority to appellee Olin, the senior party, in interference No. 91,447 between Krantz et al. application serial No. 657,482, filed May 7, 1957, for "Pharmaceutical Agent," and Olin application serial No. 37,035, filed June 20, 1960, for "Chemical Product," a continuation of application serial No. 556,056, filed December 29, 1955.

The Krantz et al. application is assigned to Air Reduction Company, Inc., of New York. Pennsalt Chemicals Corporation, of Pennsylvania, is assignee of the Olin applications.

In declaring the interference the examiner accorded Olin the benefit of the filing date of his earlier application, thereby making him senior party.

The sole count, which originated as claim 15 of the Krantz et al. application and was suggested by the examiner to Olin for the purpose of contesting priority, reads:

> A process which comprises reacting 2,2,2-trifluoroethyl p-toluene sulfonate with an alkali metal 2,2,2-

trifluoroethanolate and obtaining 2,2,2,2′,2′,2′-hexafluorodiethyl ether as a product therefrom.[1]

In the proceedings below, the parties filed a stipulation of facts and stipulated testimony in lieu of taking testimony. They also filed briefs and were represented at final hearing.

Part of the board's decision was that Olin, on the facts stipulated, did not have an *actual* reduction to practice and that he was not entitled to an award of priority on that basis. That issue is not before us because it was not raised on appeal by either party. With respect to it we wish it to be clearly understood that our decision herein is not to be taken as an approval of that holding or of the reasons given in the board's opinion in support thereof.

The board's award of priority to Olin was on the ground that he had a *constructive* reduction to practice of the process of the count as of the date of his parent application, December 29, 1955, prior to the filing date of Krantz et al., May 7, 1957, the board further holding that all of the proofs of Krantz et al. for an actual reduction to practice were subsequent to Olin's effective filing date. Since Krantz et al. expressly approve the last-mentioned finding of the board, it is not before us and, again, it is to be understood that this decision is not to be taken as an approval of it or the reasons in support of it.

The issue on appeal is a narrow one. As Olin states it, it is simply whether he constructively reduced to practice

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[1] This product, the patentability of which is still in dispute so far as the record shows, has been approved by the Federal Food and Drug Administration and is now marketed under the trademark "Indoklon." It has been found to be a "potent convulsant" and is used in the treatment of mental illness. A motion by appellants to add a count directed to this compound was denied. Its simple formula is: $CF_3$-$CH_2$-O-$CH_2$-$CF_3$. It is also known as bis(2,2,2-trifluoroethyl) ether and so referred to by Olin.

by filing his parent application. Krantz et al. say that the decision of the board "is clear and correct in every material respect save one:—the Board erred in holding that the parent Olin case * * * is (was) a complete and allowable application and that Olin is entitled to the 1955 filing date of his said parent application, for a constructive reduction to practice of the count."

Appellants' attack on Olin's applications is based on three main contentions: (1) that Olin intentionally included categorical disclosures or statements of utility for the compound produced by the claimed process and that these statements have been shown during the interference "to be in at least material part incorrect and misleading," (2) that Olin excluded or omitted information known to him at the time of filing which has been shown "to be of great importance to the proper and safe practice of the claimed new process and of the disclosed uses of the new compound produced thereby," and (3) that Olin has failed "to remove from the application the said misleading statements or to include or attempt to include therein the said omitted information." As may be seen, point (3) is somewhat repetitive of points (1) and (2).

Appellants carefully point out that the issue, in their opinion, is whether under these circumstances the Olin parent application can properly be considered complete and allowable,[2] and thus constitute a constructive reduction to practice of the process invention of the count.

Olin's applications both say (bracketed numbers inserted):

> The resulting new chemical compound of my invention, bis(2,2,2-trifluoroethyl) ether, is a colorless liquid which vaporizes readily at ordinary temperatures and

[2] Whether this issue is ancillary to priority is itself a potential issue (see *Glass* v. *DeRoo*, 44 CCPA 723, 239 F. 2d 402, 112 USPQ 62), but will not be considered since it has not been raised.

> [1] has useful solvent properties. For example, it may be used to prepare pastes or dispersions of high molecular weight fluorine compounds such as fluorocarbon waxes. [2]It also may be used to soften or solubilize polymeric materials, e.g., synthetic fibers. [3] It is chemically reactive and may be used in the preparation of other fluorinated compounds.

This passage, particularly the three numberod portions, constitutes all of the positive disclosure upon which appellants' objections are based.

As to disclosure [1], appellants contend the evidence shows that Olin, at the time of filing, had no experimental basis for such assertion and that, while his "guess" turned out to be correct as shown by the Neeley and Wamser affidavits introduced by appellants, one wishing to prepare the new compound and use it should first be informed of the following "caution" Olin had received from his pharmacologist Latven: "Thus it is apparent that this compound is extremely toxic and is absorbed systemically within seconds following inhalation. WE URGE YOU TO TAKE EVERY PRECAUTION IN HANDLING THIS MATERIAL AND TO AVOID ACCIDENTAL INHALATION AT ALL COSTS. You can imagine what might happen if the glass container were accidentally dropped and broken on the laboratory floor." Absent such information, say appellants, Olin's teaching of the use of the new chemical as a solvent to form a paste or dispersion is "misleading to the ordinary chemist who might attempt to follow the teaching of Olin according to the ordinary and normal meaning of the words and statements used in the Olin application."

As to disclosure [2], appellants point to evidence showing they tried the new compound with a number of synthetic fibers and found it would not soften or solubilize polystyrene, "Nylon," "Mylar," "Orlon," "Dacron," "Acrilan," and "Dynel," but that it did soften or swell

polyethylene and cellulose acetate "to some extent." Polyvinylidene chloride was "slightly soluble" anl polymethacrylate was said to be the only one "significantly soluble." Olin testified that he never tested or used the new compound to soften or solubilize a synthetic material.

As to disclosure [3], again Olin testified that he had never chemically reacted the new compound. Appellants' "experts" Wamser and Neeley found it to be "extremely stable."

The Board's response to appellants' position was:

> We cannot agree with Krantz *et al's.* position that the subject matter of the Olin applications is dangerous to the public and for that reason cannot serve as constructive reductions to practice. The record is decidedly to the contrary. It shows that the compound was safely handled while it was being prepared, and used for experimental and testing purposes. * * * It is, therefore, unnecessary to explore this aspect of the case in any great depth. There is of record pages 7 to 23 of The Handbook of Solvents, Scheflan and Jacobs, Tab 29, which are devoted to "Safe Practices in the Use of Solvents." On page 22, examples of labeling "dangerous" solvents, recommended by the Manufacturing Chemists Association, are given. The handbook article shows that a good many solvents are more or less hazardous to use, but this fact alone does not prevent their use.
>
> A similar situation exists in the case of drugs where the question of safety in humans was raised by the Patent Office. The Court of Customs and Patent Appeals has expressed its views regarding this subject. In In re Krimmel, 48 CCPA 1116, 292 F. 2d 948, 773 O.G. 607, 130 USPQ 215, 220, the Court said:
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> . . . the fact remains that the Patent Office has not been charged by Congress with the tasks of protect-

ing the public against possible misuse of chemical patents [materials].

And in In re Hartop, 50 CCPA 780, 311 F. 2d 249, 787 O.G. 235, 135 USPQ 419, 428, the Court, after an extended discussion of "safety" reiterated its position as set forth in its earlier decision, In re Krimmel, supra.

In short we fail to find any substance in the "safety" argument pressed by Krantz *et al.*

Nor do we agree with Krantz *et al's.* contention that the Olin applications are not constructive reductions to practice because Olin did not test for any of the utilities set forth in his applications. * * *

The difficulty with Krantz *et al's.* position is that Speers, Krantz's co-inventor, did make pastes or dispersions of fluorocarbon waxes as set forth in the Olin applications; * * *. As stated in Robinson On Patents, (1890), Vol. 1, page 464, "When actual utility exists, its degree is unimportant." On page 466 of the same work, "a patent is valid if the invention serves any use though it will not apply to all uses claimed for it;" see Phillips v. Risser (1885) 26 F.R. 308. In Landon v. Ginzton, *et al.*, 41 CCPA 950, 214 F. 2d 160, 688 O.G. 213, 102 USPQ 230, 233, the Court said:

> The patent application may reveal a number of purposes for the same invention. The inventor need prove only one practical use; only one useful result or effect.

* * * See also Friedman v. Overseas Scientific Corporation *et al.* (CA-2), 248 F. 2d 274, 115 USPQ 42, 44, wherein it was held:

> An article invented may have patentable utility even though the patented device is not unfailingly operable in all its applications. Hildreth v. Mastoras, 257 U.S. 27.

Since there is proof of one of the disclosed utilities, it is unnecessary to reach the other uses set forth in the Olin specification.

Krantz *et al.* also contend that the Olin applications should contain a warning of the danger to people of the ether. We are not impressed by this argument. The specification is addressed to persons skilled in the art. Moreover, the "safety" aspect of the case has been discussed above and need not be repeated.

Krantz *et al's.* contention that the Olin applications are not constructive reductions to practice because Olin "guessed" at the disclosed utilities must be rejected. The answer to this argument is supplied by the case Automatic Weighing Machine Co. v. Pneumatic Scale Corp. Ltd. (CCA-1), 166 Fed. Rep. 288, 1909 C.D. 498, 506, 507. The Court, in that case, referred to the Supreme Court holding in the Telephone Cases, 126 U.S. 1535, 1888 C.D. 321. There, when Bell applied for his patent he had never actually transmitted, telegraphically, spoken words so that they could be distinctly heard and understood at the receiving end of his line. But in his specification he described with sufficient precision to enable one of ordinary skill in such matters to make an apparatus, which, if used in the way pointed out, would produce the required effect, receive the words, and carry them to and deliver them at the appointed place.

The Supreme Court said in that case:

> The law does not require that a discoverer or inventor, in order to get a patent for a process, must have succeeded in bringing his art to the highest degree of perfection. It is enough if he describes his method with sufficient clearness and precision to enable those skilled in the matter to understand what the process is, and if he points out some practicable way of putting it into operation.

Clearly, Olin has complied with the law as set forth in the foregoing excerpt. The record shows that Speers produced pastes and solutions of fluorocarbon waxes, as pointed out above. Therefore, it is our view that the Olin cases are complete and allowable applications and that Olin is entitled to the filing date of his parent application, namely, December 29, 1955, for a constructive reduction to practice of the count; the Automatic Weighing Machine case, supra.

We agree with the foregoing reasoning of the board in disposing of appellants' arguments. That being so, we do not accept appellants' contention that a decision in their favor is compelled by *In re Citron*, 51 CCPA 852, 325 F. 2d 248, 139 USPQ 516, the case alleged to be closest in point. That case is entirely distinguishable on the facts, for the application there asserted a use of "much public importance," namely the effective treatment of cancer, which assertion was believed to be incredible in light of the knowledge of the art. Nothing to the contrary being shown, we affirmed the rejection in *Citron* of all claims, regardless of type. Here, asserted utilities have been shown to exist.

Appellants suggested at argument that we should apply the law of contracts as set forth in 17 C.J.S. 155, note 48, to the effect that while there may be no obligation to disclose a fact, such as a particular utility of a compound made by a process, if it *is* disclosed in an application the *whole* truth about it must be told, such as the toxicity of a material alleged to be useful as a solvent. We would suggest that this is not a contract case and that an applicant for a patent, notwithstanding the popular myth that a patent is a contract, is not negotiating a contract with the Government. Rather, he is applying for a grant in accordance with a statute under which the right to a patent depends on compliance with the statutory terms and conditions. The prosecution of an application is not bargaining but a process of demonstration and persuasion that the

statute has been complied with. The examiner was persuaded that Olin had complied and the Board of Patent Interferences was not persuaded to the contrary by Krantz et al. Nor are we.

The decision of the board is *affirmed.*

AFFIRMED

WORLEY, C. J., concurs in the result.

SMITH, Judge, concurring, with whom MARTIN, Judge, joins.

The weakness of appellants' case is manifest. They conceived the invention in issue subsequent to appellee and filed their patent application subsequent to appellee's parent application. Appellants' proofs of an asserted actual reduction to practice establish a date subsequent to the date of appellee's constructive reduction to practice.

While appellee failed to prove an actual reduction to practice to the board's satisfaction, priority of the invention was awarded on the basis of appellee being the first to establish a constructive reduction to practice. To prevail here, appellants must establish that appellee was improperly given the benefit of the earlier filing date of a parent application. They seek to do so by asserting that appellee's applications

> *can not,* under the applicable law, be taken or regarded as complete and allowable applications and that Olin is *not* entitled to the filing date of his parent application * * * for a constructive reduction to practice of the count.

The *theory* of appellants' case is that if it can be shown that Olin did not file "complete and allowable" applications, appellee is not entitled to rely upon them to establish a constructive reduction to practice. In this case appellants, by reason of their filing date, would then be entitled to the award of priority. The *arguments* urged and

authorities cited in support of appellants' *theory* are confused and I do not find them to be persuasive.

Appellants assert that appellee's applications are not "complete and allowable" essentially for two reasons: (1), Olin did not disclose in his application that the product made by the process defined by the count was "dangerous" because of its usefulness as a convulsant agent;[1] and (2) while the count relates to a process, Olin did not actually make the products which he stated in his specification could be prepared from the product of the process.

As authority for the proposition that appellee failed to file a "complete and allowable" application, appellants cite 35 USC 112, 35 USC 282, and *Union Carbide & Carbon Corp.* v. *Stuart Laboratories, Inc.*, 194 F. 2d 823, 92 USPQ 262 (3rd Cir. 1952). These authorities will be considered individually.

First, considering 35 USC 112, appellants argue that *because* appellee failed to disclose that the product made by the process was useful as a convulsant, *it follows* that the disclosure failed to set forth, "in such full, clear, con-

[1] This is the apparent source of conflict between the parties. Olin's agent stated in a report dated August 29, 1955 that "violent clonic convulsions appeared in the mice within twenty (20) seconds," after inhaling the product made by the process. Olin's agent testified that this was "opposite to what was anticipated." Olin testified that he had expected the product would be "an anesthetic of low toxicity." Olin filed an application disclosing the product and the process. He did not disclose or claim use of the product as a convulsant. Krantz also conducted experiments with mice in January, 1956, and discovered the convulsant properties of the product. They then conducted experiments with humans beginning in September, 1956, and finally filed an application disclosing and claiming the process, the product made by the process and the use of the product as a convulsant agent. The record shows that the Patent Office, prior to the interference, considered the product to be unpatentable over the prior art and refused to add a count, upon appellants' motion, defining the product, to this interference.

cise, and exact terms as to enable any person skilled in the art" to "make and use" *the process.* I fail to understand the relationship between such cause and effect reasoning. Appellants admit that the appellee's disclosure does teach one of ordinary skill in the art how to practice the process defined by the count. It seems to me, therefore, that this satisfies the terms of section 112. *Swain et al.* v. *Crittendon,* 51 CCPA 1459, 332 F. 2d 820, 141 USPQ 811.

Appellants' reliance on section 112 is unfounded for another reason. The board in its opinion found that appellee's right to the filing date of his parent application was "not in dispute here." That is to say, appellee is entitled under 35 USC 120 to rely on the filing date of his parent application. This would seem to be tantamount to a finding that the terms of 35 USC 112 were satisfied by the parent application. See *Swain,* supra. I am unable to understand how appellants can consistently concede that section 120 is satisfied and yet argue that section 112 has not been complied with.

As the majority opinion notes, we are first required to assume that the matters raised by appellants are ancillary to priority. I would add that we are also asked to assume that while the conditions of 35 USC 120 have been met by appellee, we are expected to go further and decide whether appellee's parent application was "complete and allowable" as filed, for alleged failure to comply with 35 USC 112. The Patent Office has not raised any question about the compliance of appellee's parent application with the conditions of section 112. It seems to me on the present record that appellee's parent application complies with section 112 and that appellee was properly permitted to rely upon its filing date as appellee's date of a constructive reduction to practice.

Appellants also allege, without setting forth any explanation or reasoning, that the terms of 35 USC 282 have not been complied with. Independent investigation reveals

that section 282 provides as a defense in an infringement suit the "invalidity of the patent * * * on any ground specified in part II of this title [Patentability of inventions and grant of patents] as a condition for patentability," and "invalidity of the patent * * * for failure to comply with any requirements of sections 112 or 251 [Reissue of defective patents] of this title." I am at a loss to see how these sections aid appellants in establishing that appellee's parent application as filed was incomplete. It seems to me that appellants' unsupported and broad allegation that Part II of Title 35 (35 USC 100-188), has not been complied with, is insufficient as a matter of law to warrant consideration.

Finally, appellants cite *Union Carbide,* supra. In that case the question was whether the description of the process in the patent was sufficient to enable a person skilled in that art to practice the invention. The court generalized broadly that where "the patentee omitted elements which he knew were important, fraud will be implied by the fact finder." 92 USPQ at 265. The defendants had argued that the invention would have worked *better* if the patentee had disclosed certain procedural steps which, admittedly, at the time of the filing of the application were of questionable value. The court also generalized that a patentee must disclose "the whole truth relative to their invention." The court affirmed the judgment of the trial court which found the patent valid and infringed.

Broad generalizations drawn from prior decisions solve few problems and often are cited incorrectly for propositions which they do not support. The issue in dispute in *Union Carbide* was whether the terms of 35 USC 112 had been satisfied. As we have previously noted, appellants concede this issue here. Thus appellants' reliance on *Union Carbide* seems to have been misplaced.

The theory of appellants' arguments appears to have been extracted from the following statement concerning

Constructive Reduction to Practice to be found in Rivise & Caesar, Interference Law & Practice, Vol. 1, Sec. 158, at p. 497. It is there stated:

> The third prerequisite [for an applicant to be entitled to rely upon the filing date of a patent application for his reduction to practice] is that the application relied upon for a constructive reduction to practice must be one that could result in a valid patent if *prosecuted to final allowance.*

Appellants, while footnoting the above statement with no particular emphasis, argue that the alleged deficiencies they have "found" in appellee's application are uncontroverted proof that appellee's application, if prosecuted to final allowance, could not result in a valid patent. The statement from Rivise & Caesar and appellants' reliance thereon is not supported by reference to any statutory provision or by case law. Rivise & Caesar refers the reader to section 13 in which the authors discuss and cite cases concerned with the alteration of an application after execution. This area of law was extensively reviewed by Judge Rich in *Vandenberg* v. *Reynolds,* 44 CCPA 873, 242 F. 2d 761, 113 USPQ 275. Therein it was determined that the junior party was entitled to attack the sufficiency of the senior party's application as filed, on the grounds that it had been altered after execution, where the senior party relied on the filing date of the thus altered application as a constructive reduction to practice. It was there reasoned that a *decision on priority* rested on the sufficiency of the application as filed and the critical question raised, based on the allegations, was whether the application was void ab initio. An application burdened with such a defect could not, under the law, be relied upon as establishing a constructive reduction to practice because there was no sworn support for the altered application.

From the foregoing, it seems clear that appellants must have taken the statement from Rivise & Caesar out of con-

text as the authors apparently intended only to cover the area of law which was more fully developed in *Vandenberg*, supra.

The dispositive issue here for decision is *priority of inventorship*. It is not whether appellee's parent application would result in a valid patent if prosecuted to final allowance.

In the instant case, priority of inventorship was awarded to Olin by the board because it found that Olin was the first to conceive the invention and file an application on it with no argument to the contrary. Priority thus was determined on the basis of Olin's first conception plus his first constructive reduction to practice. This clearly is an adequate basis upon which to make a valid award of priority.

I do not question the authorities cited by the majority. It seems to me, however, that this appeal presents questions of patent law which are broader in scope than the majority opinion has chosen to deal with, hence my concurrence. I would predicate affirmance of the appealed decision on the failure of the arguments advanced by appellants in showing why appellee's parent application was so "incomplete" as to be insufficient as a matter of law.

## APPENDIX III

### Decision of Board of Patent Interferences, October 10, 1963

The common invention at issue is aptly illustrated by the following single count:

*Count 1*

A process which comprises reacting 2,2,2-trifluoroethyl p-toluene sulfonate with an alkali metal 2,2,2-trifluoroethanolate and obtaining 2,2,2,2′,2′,2′-hexafluorodiethyl ether as a product therefrom.

Krantz *et al.* disclose their ether to be useful as a convulsive shock agent in the treatment of mental illness. Olin's disclosure is that his ether has useful solvent properties; that it may be used to prepare pastes or dispersions of high molecular weight fluorine compounds such as fluorocarbon waxes; that it may be used to soften or solubilize polymeric materials, e.g., synthetic materials; and that it is chemically reactive and may be used in the preparation of other fluorinated compounds. The parties properly recognized that the difference in objectives is immaterial since they have made no issue regarding this difference; Davis *et al.* v. Isham *et al.*, 21 CCPA 1222, 71 F. 2d 204, 1934 C.D. 574, 21 USPQ 630; Wemple *et al.*, v. Pierce *et al.*, 22 CCPA 1064, 75 F. 2d 998, 1935 C.D. 428, 25 USPQ 37; Becket v. Arness, 27 CCPA 1251, 112 F. 2d 1011, 1940 C.D. 589, 46 USPQ 48.

The count, which originated in the Krantz *et al.* application where it appears as original claim 15, was suggested by the Examiner to Olin for the purpose of contesting priority. When Olin made the claim in his involved application the interference was declared.

An application of Krantz *et al.* filed May 7, 1957, is in interference with an application of Olin filed June 20, 1960. Olin is senior party because in declaring the interference the Examiner accorded him the benefit of the filing date of

December 29, 1955, of his earlier filed copending application. This last mentioned date is not in dispute here.

The Krantz *et al.* application is assigned to Air Reduction Company Incorporated, of New York, while Pennsalt Chemicals Corporation, of Pennsylvania, is the assignee of the Olin applications. These are the real parties in interest.

Krantz *et al.*, the junior party, have the burden of establishing priority by a preponderance of the evidence.

The parties filed a stipulation of facts and stipulated testimony in lieu of taking of testimony. They also filed briefs and were represented at final hearing.

According to the stipulation of facts it was stipulated by the parties that Olin performed the steps of the process of the count in May, 1955 and identified the product of that process to be bis-trifluoroethyl ether on July 28, 1955; and that Krantz *et al.* performed the steps of the process of the count in November, 1955, and identified the product of that process to be hexafluorodiethyl ether on November 30, 1955. The parties also stipulated that the two names, inter alia, identify the same product of the process of the count.

Because of the aforementioned stipulations Olin argues that he reduced to practice in May, 1955, and cites In re Wilkie *et al.*, 50 CCPA 964, 314 F. 2d 538, 793 O. G. 394, 136 USPQ 435, as support for his position.

The heart of Krantz *et al's* case is that (main brief, page 30):

> The claim which represents the count in issue is not adequately supported by the Olin application. The process defined by this claim never was actually or constructively reduced to practice by Olin for the reason that Olin never discovered, nor did he adequately

disclose, any bona-fide use or utiltiy for the process defined by the said count.

The foregoing is evidently based on pages 5 to 6 of the stipulation of facts; the stipulated deposition of Olin, pages 39 to 41; and the stipulated affidavits of Neeley, pages 51 to 53, which are based on the ex parte tests conducted by Speers as set forth in stipulated Krantz *et al.* Exhibit 7; and of Wamser, pages 55 to 60. This evidence, briefly summarized, is that neither Olin nor any agent acting in his behalf ever tested the ether produced by the process of the count for his disclosed uses; that that ether does not possess in part the utilities described for it in the involved Olin application; and that the ether is toxic to humans in small amounts which fact is not disclosed in the involved Olin disclosure.

It may be noted that the involved Olin application is stated to be a continuation of the Olin parent application which, as pointed out above, has been accepted by the Examiner. Consequently, the same charges made against the involved Olin application run to the parent application. Since the two are substantial duplicates we will confiine our remarks to the involved Olin case.

Turning now to Olin's case for a reduction to practice based on the In re Wilkie *et al.*, case, it is our opinion that the decided case is restricted to the proving of a constructive reduction to practice only. We are confirmed in this view of the case by the Court's opinion in In re Nelson *et al.*, 47 CCPA 1033, 280 F. 2d 172, 758 O. G. 233, 126 U.S.P.Q. 242, 255, where the court drew a distinction between a constructive reduction to practice and testing required to establish utility in inter parties priority disputes. In the Nelson *et al.* case, the Court refused to extend the holding thereof to a case where testing may be required in an inter partes priority case (interference) to establish utility because the decided case was an ex

parte case. In short, In re Wilkie *et al.* cannot be relied upon, in this case, to prove an actual reduction to practice merely because the steps of the count were carried out.

The law governing the proving of an actual reduction to practice of a process is set forth in Birmingham v. Randall, 36 CCPA 780, 171 F. 2d 957, 620 O. G. 683, 80 USPQ 371, 372. There the Court said:

> The invention in issue is a method of making a product. We have repeatedly held that such an invention is not reduced to practice until it is established that the product made by the process is satisfactory, and that this may require successful testing of the product. (citing decisions).

The testing of the product, as set forth in the Birmingham case, supra, is required to demonstrate the utility thereof is amply borne out by the record. The stipulated affidavit of Neeley (Rec., page 50) states that to the best of his knowledge the ether "has never been known and prepared or any method for its preparation disclosed" prior to the filing of the parties' involved application; and that he is aware of no practical or effective use of the ether other than as a convulsant as disclosed by Krantz *et al.* In this connection, page 6 of the Krantz *et al.* main brief states that both parties concede that the ether of the process of the count has never been synthesized prior to the filing of the parties' involved applications.

On the other side of the picture, there is the Examiner's position that the product is shown to be old in Henne *et al.*, *Jour. Am. Chem. Soc.*, Vol. 72 (1950), pages 4378 to 4380. In the Examiner's answer to an appeal in the parent Olin application from the final rejection of Claim 1 drawn to the ether per se on this Henne *et al.* article, the Examiner held that:

> Here Henne *et al.* name this specific ether as exemplary of a class of beta-fluorinated compounds,

although they do not disclose if or how this specific ether is prepared.

There is also in the record of the earlier Olin application an affidavit by Dr. Henne that the ether of the article was hypothesized, that it was a non-existent compound at that time and that Mr. Smook, co-author of the article in question, unsuccessfully tried to prepare the ether.

Neeley's affidavit, supra, takes on added significance, as regards proving actual reduction to practice, when it is considered that the Henne *et al.* article does not describe any uses. But Olin has placed in evidence three patents—Benning *et al.*, Pat. No. 2,336,921; McBee *et al.*, Pat. No. 2,452,944; and Simons, Pat. No. 2,500,388—to show that because the ether in question has obvious structural similarity to the patented compounds then one skilled in the art would expect the instant ether to be useful at least as a solvent as are the patented compounds.

It is clear to us that the ether produced by the process of the count is of such a nature that tests would be necessary to determine whether or not it was satisfactory. The ether is asserted by the parties to be new—there is a dispute between the parties and the Examiner as to this—and there is no evidence adduced, other than the involved applications, which describes the compound by giving a use or uses, for example. It is evident that, while the solvent properties of the ether might be reasonably deduced from its similarity to the known patented compounds, supra, they could not be foretold with certainty. In this connection, the parties subjected their compounds to tests and Speers (Rec., page 16, Krantz Exhs. 7, Tab 12 and VF, Tab 25; the Neeley and Wamser affidavits, Appendices IV and V) made extensive solvency tests. Blicke v. Treves, 44 CCPA 753, 241 F. 2d 718, 717 O. G. 215, 112 USPQ 472, 475; Gallagher v. Hien, 25 App. D. C. 77, 1905 C. D. 624, 628. For these reasons, the instant ether is not of such a nature that it is reduced to practice merely by making it.

Testing to demonstrate utility of the compound is necessary to prove an actual reduction to practice; Birmingham v. Randall, supra.

Since Olin has stipulated (1) that the pharmacological testing of the ether by Latven was unsuccessful, and (2) that no further tests were conducted by or on behalf of himself, Olin has not proved an actual reduction to practice.

This brings us to the parent application. As pointed out above, Krantz *et al's.* attack on the involved Olin application runs to the parent Olin application as well. We cannot agree with Krantz *et al's.* position that the subject matter of the Olin applications is dangerous to the public and for that reason cannot serve as constructive reductions to practice. The record is decidedly to the contrary. It shows that the compound was safely handled while it was being prepared, and used for experimental and testing purposes. See Rec., page 56. It is, therefore, unnecessary to explore this aspect of the case in any great depth. There is of record pages 7 to 23 of The Handbook of Solvents, Scheflan and Jacobs, Tab 29, which are devoted to "Safe Practices in the Use of Solvents." On page 22, examples of labeling "dangerous" solvents, recommended by the Manufacturing Chemists Association, are given. The handbook article shows that a good many solvents are more or less hazardous to use, but this fact alone does not prevent their use.

A similar situation exists in the case of drugs where the question of safety in humans was raised by the Patent Office. The Court of Customs and Patent Appeals has expressed its views regarding this subject. In In re Krimmel, 48 CCPA 1116, 292 F. 2d 948, 773 O. G. 607, 130 USPQ 215, 220, the Court said:

> . . . the fact remains that the Patent Office has not been charged by Congress with the tasks of protecting the public against possible misuse of chemical patents.

And in In re Hartop, 50 CCPA 780, 311 F. 2d 249, 787 O. G. 235, 135 USPQ 419, 428, the Court, after an extended discussion of "safety" reiterated its position as set forth in its earlier decision, In re Krimmel, supra.

In short we fail to find any substance in the "safety" argument pressed by Krantz *et al.*

Nor do we agree with Krantz *et al's.* contention that the Olin applications are not constructive reductions to practice because Olin did not test for any of the utilities set forth in his applications. They contend, therefore, that the Olin applications lack utility.

The difficulty with Krantz *et al's.* position is that Speers, Krantz's co-inventor, did make pastes or dispersions of fluorocarbon waxes as set forth in the Olin Applications; see Rec., pages 51 and 59; Krantz *et al.* Exh. 7. As stated in Robinson On Patents, (1890) Vol. 1, page 464, "When actual utility exists, its degree is unimportant." On page 466 of the same work, "a patent is valid if the invention serves any use though it will not apply to all uses claimed for it;" see Phillips v. Risser (1885), 26 F. R. 308. In Landon v. Ginzton et al., 41 CCPA 950, 214 F. 2d 160, 688 O.G. 213, 102 USPQ 230, 233, the Court said:

> The patent application may reveal a number of purposes for the same invention. The inventor need prove only one practical use; only one useful result or effect.

This excerpt from the Landon case was quoted with approval in Conner v. Joris, 44 CCPA 772, 241 F. 2d 944, 717 O.G. 415, 113 USPQ 56, 58, 59. See also Friedman v. Overseas Scientific Corporation *et al.* (CA-2), 248 F. 2d 274, 115 USPQ 42, 44, wherein it was held:

> An article invented may have patentable utility even though the patented device is not unfailingly operable in all its applications. Hildredth v. Mastoras, 257 U. S. 27.

Since there is proof of one of the disclosed utilities, it is unnecessary to reach the other uses set forth in the Olin specification.

Krantz *et al.* also contend that the Olin applications should contain a warning of the danger to people of the ether. We are not impressed by this argument. The specification is addressed to persons skilled in the art. Moreover, the "safety" aspect of the case has been discussed above and need not be repeated.

Krantz *et al's.* contention that the Olin applications are not constructive reductions to practice because Olin "guessed" at the disclosed utilities must be rejected. The answer to this argument is supplied by the case Automatic Weighing Machine Co. v. Pneumatic Scale Corp. Ltd. (CCA-1), 166 Fed. Rep. 288, 1909 C.D. 498, 506, 507. The Court, in that case, referred to the Supreme Court holding in the Telephone Cases, 126 U. S. 1,535, 1888 C. D. 321. There, when Bell applied for his patent he had never actually transmitted, telegraphically, spoken words so that they could be distinctly heard and understood at the receiving end of his line. But in his specification he described with sufficient precision to enable one of ordinary skill in such matters to make an apparatus, which, if used in the way pointed out, would produce the required effect, receive the words, and carry them to and deliver them at the appointed place.

The Supreme Court said in that case:

> The law does not require that a discoverer or inventor, in order to get a patent for a process, must have succeeded in bringing his art to the highest degree of profection. It is enough if he describes his method with sufficient clearness and precision to enable those skilled in the matter to understand what the process is, and if he points out some practicable way of putting it into operation.

Clearly, Olin has complied with the law as set forth in the foregoing excerpt. The record shows that Speers produced pastes and solutions of fluorocarbon waxes, as pointed out above. Therefore, it is our view that the Olin cases are complete and allowable applications and that Olin is entitled to the filing date of his parent application, namely, December 29, 1955, for a constructive reduction to practice of the count; the Automatic Weighing Machine case, supra.

Adverting to the case for Krantz *et al.* it is noted that they do not rely on diligence so that it is unnecessary to consider this issue as well as conception. Krantz et al. can prevail only if they can prove an actual reduction to practice prior to Olin's effective filing date.

All of Krantz *et al's.* proofs for an actual reduction to practice are subsequent to the Olin effective filing date. For example, the Krantz *et al.* main brief, at pages 12, 21 and 31, admits that their testing as an inhalation anesthetic was unsuccessful. Krantz *et al.* Exhibit 3, dated January 30, 1956 Tab 5, is the evidence upon which the admission is based and is evidence of the earliest testing by Krantz *et al.* There is, therefore, no need, in the absence of diligence, to inquire into the subsequent work of Krantz *et al.* Manifestly, on this record, Krantz *et al.* cannot prevail. Olin is the first to conceive and the first to reduce to practice by virtue of the filing of his parent application. Olin is, therefore, entitled to the award of priority.

Rule 255 makes it discretionary with us to accept or reject Krantz *et al's.* proposed findings of fact and conclusions of law (Reply Brief, pages 20 to 22). Because of our detailed treatment of the various issues advanced no need is seen to specifically consider the proposed findings and conclusions of law.

Priority of the subject matter in issue is hereby awarded to John F. Olin, the senior party.

BOARD OF PATENT INTERFERENCES

WARREN H. WILLNER
*Examiner of Interferences*

S. LEVIN
*Examiner of Interferences*

GEORGE W. BOYS
*Examiner of Interferences*

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## APPENDIX IV

### Order

UNITED STATES COURT OF CUSTOMS AND PATENT APPEALS

Thursday, March 10, 1966

At a session of said court continued and held at the city of Washington, pursuant to adjournment, on this 10th day of March, A. D. 1966.

Present the Honorable Eugene Worley, Chief Judge, and the Honorables Giles S. Rich, I. Jack Martin, Arthur M. Smith and J. Lindsay Almond, Jr., *Associate Judges.*

The court was opened for business in due form.

* * * * * * * * * * *

Patent Appeal No. 7415

JOHN C. KRANTZ, JR. and LOUISE SPEERS CROIX, *Appellants,*

v.

JOHN F. OLIN, *Appellee.*

Said appeal having heretofore been brought on to be heard before the court and due consideration thereon having been had, it is—

ORDERED that the decision of the Board of Patent Interferences be, and the same is hereby, affirmed. Opinion by Rich, Associate Judge. Chief Judge Worley concurs in the result. Concurring opinion by Judge Smith with whom Judge Martin joins.

* * * * * * * * * * *

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## APPENDIX V

### Petition of Krantz and Croix for Rehearing

FOREWORD

This case was decided by this Court on March 10, 1966.*

Eleven days later, on March 21, 1966, the Supreme Court of the United States decided the case of *Brenner* v. *Manson*, — U.S. —, 148 U.S.P.Q. 689, reversing a decision of this Court** on writ of certiorari.

Believing the now applicable case law with respect to utility of a chemical process as laid down by the Supreme Court in *Brenner* v. *Manson, supra,* to be contrary to the law that had been applied to the present case at the time of its argument and decision, appellants, Krantz and Croix, moved on March 31, 1966 for an extension of time to file a petition for rehearing in this Court. Such motion was granted by this Court and the time for filing this petition was extended to May 3, 1966. Accordingly, this petition is timely filed.

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* Rich, J.'s opinion for the Court is reported at 148 U.S.P.Q. 659, — F. 2d —, 53 C.C.P.A. —; Worley, C. J., concurred in the result; Smith, J. concurred specially in an opinion reported at 148 U.S.P.Q. 663, — F. 2d —, 53 C.C.P.A. —, in which Martin, J. joined.

** *In re Manson,* 142 U.S.P.Q. 35, 333 F. 2d 234, 52 C.C.P.A. 739 (1964).

THE BASIS OF THIS PETITION

It now appears (in view of the Supreme Court decision in the *Manson* case) that a mistake of law was involved in the original hearing of this cause.

At the time of argument of the present case before this Court, the prior decision of this Court in *In re Manson, supra,* was controlling law on the requirements for utility of the product of a patentable process claim. The Supreme Court had not yet spoken on the merits of that issue involved in the *Manson* case. There was even a question as to whether it would so speak because never before had there been an instance where the Supreme Court had taken and decided any patent case on writ of certiorari to the Court of Customs and Patent Appeals.

Therefore Krantz's attack on the "utility" disclosure in the Olin application necessarily was severely circumscribed, as compared to what it could have been had the applicable constitutional provisions, patent statutes and Patent Office regulations been interpreted as they have since been interpreted by the Supreme Court in its decision in the *Manson* case.

Thus, Olin was at the time of argument of this cause in a position to state, without fear of effective rebuttal by Krantz, what now clearly appears to have been a mistake of law although not so recognized at the time:

> "The statements of this Court [the C.C.P.A.] in the case of *In re Manson* make it clear beyond question that whatever may have been the case previously, it is no longer required by this Court that a patent specification describe uses for the product of a claimed method in order to support properly claims to the method."

and:

> ". . . Appellant's challenge is directed not to a requirement going vitally to the adequacy of the application

but rather to a gratuitous statement that could have been entirely omitted without affecting in the least the adequacy of the application to support the method claim in contest."

The above are quotations from Olin's brief on appeal to this Court, page 5.

It is respectfully submitted that in order to correct this error, or at least to afford Krantz an adequate opportunity to be heard thereon, this Court should rehear and reconsider this case in the light of the decision by the Supreme Court overruling the decision of this Court in the *Manson* case. Whatever the ultimate wisdom of the higher Court's decision in the *Manson* case may turn out to be, it does represent the law of the land and Krantz is believed entitled, in fairness, to have his claim of right to the claim here in issue adjudicated on the basis of the law as it exists and not solely on the basis of what the parties involved mistakenly thought it to be.

## Reasons Why This Petition Should Be Granted

The primary, and "private," reason for granting this petition is that a rehearing is necessary, in the submission of Krantz, in order that both parties can be heard on the question of what effect, if any, the action of the Supreme Court in overruling this Court's decision in the *Manson* case has on this Court's decision in the present case. In this connection it should be noted that the ruling of the Court in the present case is not yet final. The time prescribed by its Rule VII for granting a rehearing has not yet expired.

A secondary, and "public," reason for rehearing this cause is that prompt application and further interpretation of the Supreme Court's decision in the *Manson* case is believed in the public interest. The law pertaining to disclosure of utility in patent applications has undergone a

change in recent years. It appears that further changes will now be necessary. The more promptly the pending questions are settled in appropriate cases (and the present case is believed to be an appropriate case), the less likely the possibility that future mistakes may accur in the filing of patent applications or the issuance of patents thereon involving questions of utility for the product of a chemical process.

## Questions Presented

I. *Re Utility:* Does the patent application of the party Olin meet the standard of utility for a claim directed to a new chemical process, and the standards of disclosure of utility for such a process claim, announced by the Supreme Court in the *Manson* case?

II. *Re "Making" an Invention:* If neither the patent application nor the pre-application work of the party Olin meets the standards of utility and the standards of disclosure of utility required under the doctrine of the *Manson* case, then can Olin properly be awarded a date for "making" the invention of the process claim in issue on the basis either of having filed his application or his work?

III. *Re Remand of the Case to the Patent Office:* Should this interference, particularly the sufficiency of the Olin position, be remanded to the Patent Office for reconsideration in the light of the Supreme Court ruling in the *Manson* case?

## Argument

Question I: Re Utility: *Does the patent application of the party Olin meet the standard of utility for a claim directed to a new chemical process, and the standards of disclosure of utility for such a process claim, announced by the Supreme Court in the* Manson *case?*

Petitioners contend that it is now the law in the United States that a "*substantial*,"* "*practical*,"** and "*specific*"*** utility for the product of a chemical process is prerequisite to the patentability of such process. At least in those instances where such a utility was not previously known and disclosed in the prior art, an applicant for patent directed to a chemical process must, in order to have a sufficient and adequate application, include a sufficient and adequate showing or teaching therein of such a substantial, practical, and specific utility.

It follows, contrary to the statements made in Olin's brief on appeal, that the utility prerequisite (and disclosure thereof) *does* go vitally to the adequacy of the Olin application and that Olin's statement of utility *cannot* be regarded as a "gratuitous statement that could have been entirely omitted without affecting in the least the adequacy of the application to support the method claim in contest."

Rather, Olin's statement of utility must, in order to determine if the Olin specification (or the Olin work) is sufficient and adequate to support the process claim in issue,

---

* "The basic quid pro quo contemplated by the Constitution and the Congress for granting a patent monopoly is the benefit derived by the public from an invention with *substantial* utility." [Emphasis added.] 148 U.S.P.Q. 695.

** "This case presents two questions of importance to the administration of the patent laws: * * * second, whether the *practical* utility of the compound produced by a chemical process is an essential element in establishing a prima facie case for the patentability of the process." [Emphasis added.] 148 U.S.P.Q. 690.

*** "* * * a more compelling consideration is that a process patent in the chemical field, which has not been developed and pointed to a degree of *specific* utility, creates a monopoly of knowledge which should be granted only if clearly commanded by statute. * * * Unless and until a process is refined and developed to this point—where *specific* benefit exists in currently available form—there is insufficient justification to engross what may prove to be a broad field." [Emphasis added.] 148 U.S.P.Q. 695.

be examined and considered to determine if either was, within the meaning of the *Manson* case, substantial, practical, and specific as opposed to insignificant, speculative, and merely general.

When so examined and considered in the light of the *Manson* case, it becomes clear that Olin's "utility" and the disclosure thereof in the Olin application was neither substantial, nor practical, nor specific. The record in this interference shows by uncontroverted evidence:

(a) That Olin was searching for a new anesthetic. He *tested* the product of the process defined by the interference count *only* for this use and such tests *failed* R-173-175; App. I*).

(b) That the statements of use in the Olin application were pure guesses or speculation, even though positively recited (R-173-175; App. I).

(c) That the uses alleged in the Olin application are impractical as shown by the affidavits of Krantz's experts, Wamser, and Neeley (R-182-186, 178-182; Excerpts reproduced in App. II). Olin not only has failed to controvert these affidavits, but, in fact, accepted them by relying thereon in an attempt to support his own case (Olin Brief, p. 7).

(d) That there is no evidence of record in this interference showing or tending to show that the uses stated in the Olin application are in reality substantial or practical uses (R-149; App. III).

(e) That the uses stated in the Olin application are obviously and on their face vague and incomplete. Olin's "use" disclosures were not carried to the point wherein they properly could be regarded as "specific"

* For the convenience of the Court the three passages from the Record particularly relied upon to support this petition which appellants wish the Court to re-read are reproduced as Appendices I, II, and III, at the end of this petition.

uses within the meaning of the *Manson* case. In fact, the experts Wamser and Neeley stated that in their opinion fluorocarbon pastes or dispersions made with hexafluorodiethyl ether would have no practical utility (R-186, 180; App. II). Their testimony with respect to those fibers that could be softened with hexafluorodiethyl is to the same effect (ibid.). And they testified, contrary to Olin's "guess," that the compound was "chemically stable" rather than being "chemically reactive" (Ibid.). In the face of the testimony by Wamser and Neeley as to the stability of the compound, Olin's vague statement to the effect that hexafluorodiethyl ether "may be used in the preparation of other fluorinated compounds" could be no more than an invitation to do research. It is not statement of a specific utility. The Supreme Court in the *Manson* case expressly considered and denied the contention that such "potential usefulness" is enough. Rather it held that a patent is to be regarded not as a reward for the search, but as compensation for its successful conclusion.

Appellants recognize that many, if not all, liquids have sovlent properties to some degree and that many, if not all, compounds can be caused to react to form other compounds. Thus in a very broad sense it could be said that Olin's speculation to the effect that his new compound has these properties can be considered true. In fact, Krantz's experts, Wamser and Neeley, did show by test that the product of the count does have some solvent properties. And Krantz does not deny that any compound or element can be reacted if the reaction conditions are sufficiently stringent. But such theoretical or academic "utility" is a far cry from the substantial, practical, and specific use that, appellants submit, is required under the legal principles applied by the Supreme Court in the *Manson* case. When the record of this case is viewed as a whole, as it should be, it becomes very clear that Olin did not

press his search to a successful conclusion. He did carry out the process and produce the compound. So did Manson. But, when Olin tested his compound for the only practical use he had intended (as an anesthetic), it failed in the very first phase of testing (the initial experiments on mice). Having failed in his search for an anesthetic Olin stopped all work and turned to the Patent Office in an attempt to reap the reward for his search by filing a patent application.

Appellants submit that what Olin actually did was to substitute a so-called "spurious" or "makeweight" use* in the disclosure of his patent application for the originally intended actual use which he had tested and found unsuccessful. To permit "spurious" or "makeweight" uses to suffice for the requirement of utility obviously would be quite helpful to patentees if permitted, but this clearly would not be in accord with the constitutional and legislative purposes of the patent system as interpreted by the Supreme Court in the *Manson* case. What Olin did is contrary to the doctrine the Supreme Court has laid down in the *Manson* case. Consequently, this Court should now hold that Olin's application does not meet the minimum applicable *prima facie* standards of utility and disclosure thereof as required by the *Manson* case.

QUESTION II: RE "MAKING" AN INVENTION: *If neither the patent application nor the pre-application work of the party Olin meets the standards of utility and the standards of disclosure of utility required under the doctrine of the* MANSON *case, then can Olin properly be awarded a date for "making" the invention of the process claim in issue on the basis either of having filed his application or his work?*

---

* Any new compound having significant mass has such a "spurious" use as a paperweight; any new liquid is almost sure to be a solvent for something. While such "utility" may meet the now-rejected "Story test" for utility, that test has been expressly repudiated by the *Manson* decision.

The legal question raised in this interference proceeding is one of priority of invention. This question in turn depends on the issue of whether or not Olin ever did "make" the "invention" which is the subject of the interference and, if so, whether or not he did so before Krantz. Because Krantz beyond doubt did "make" the inevtion and Olin has never denied this.

Olin did not contend in the course of the original hearing that he ever "made" the invention by way of an actual reduction to practice. It is believed he made no such contention because he apparently accepted the fact that his only test for utility had failed (See Appendices I, II, and III). The decision of the Supreme Court in the *Manson* case makes it clear that Olin's concession in this respect was correct.

Olin did, however, contend that he had "made" the invention by the filing of his patent application, in which utilities were alleged other than the one for which he had tested and found to be non-existent. But the speculative uses so alleged in his patent application were in fact no more than "spurious" or "makeweight" uses. They clearly are not the substantial, practical and specific uses now believed to be required by the tests of the *Manson* case, as decided by the Supreme Court. Consequently, such spurious utility must, it is contended, be regarded as legally ineffective and as little or no better than nothing at all. In the opinion of Krantz, such uses are even worse than nothing at all because they are considered misleading for the reasons pointed out by Krantz in his original argument of this cause. See *In re Citron,* 139 U.S.P.Q. 516, 325 F. 2d 248, 51 C.C.P.A. 852 (1963) and *In re Citron,* 139 U.S.P.Q. 520, 325 F. 2d 254, 51 C.C.P.A. 859 (1963).

And this insufficiency and inadequacy of the Olin "use" disclosures is considered clearly to be ancillary to priority in the light of the Supreme Court's ruling in the *Manson* case. If no utility for the product is actually known (as

was the situation with Olin in the present case), and if a substantial, practical, and specific utility must be either known or be shown (as is believed to be required by the Supreme Court's ruling in *Manson*), then Olin in order to provide a sufficient disclosure to support his process claim was *required* to disclose its product "in such full, clear, concise and exact terms as to enable any person skilled in the art * * * to make *and use* the same." 35 U.S.C. § 112 [Emphasis added]. Having failed to do so, within the meaning of the "substantial," "practical," and "specific" tests laid down by the Supreme Court, Olin cannot properly be said to have made or completel his invention either by reason of his unsuccessful test for a non-existent utility or by the filing of his patent application reciting insignificant, impractical, and vaguely generalized speculations as to usefulness.

QUESTION III: RE. REMAND OF THE CASE TO THE PATENT OFFICE: *Should this interference, particularly the sufficiency of the Olin position, be remanded to the Patent Office for reconsideration in the light of the Supreme Court ruling in the* MANSON *case?*

It has occurred to Appellants that this Court may, in the event rehearing is granted, desire first to have the Patent Office reconsider the sufficiency of Olin's "use" disclosures, either with or without the benefit of further testimony, in the light of the new requisites for utility announced by the Supreme Court in *Manson*. No objection will be made on the part of the party Krantz to any such remand if this Court, or the party Olin subject to approval of this Court, may find that a remand for such purpose would be helpful to the proper disposition of this cause.

We are mindful that the Supreme Court has recently suggested that public issues of importance should not be decided on stipulated records made before full and correct appreciation of the legal issues involved, *Public Affairs Associates, Inc.* v. *Rickover*, 365 U.S. 841 (1962), and has

even more recently indicated the propriety of remand on the Customs side of the work of this Court, *Clayton Chemical and Packaging Co.* v. *United States*, — U.S. — (March 28, 1966).

### Conclusion

It is respectfully submitted that this Court should re-examine its ruling as to the showing of utility made on behalf of the Olin application here in issue and to that end grant a rehearing in order to have the benefit of the argument of counsel with respect to the applicability to that ruling of the new *Manson* standards of utility.

This Petition of Krantz and Croix for Rehearing should be Granted.

## APPENDICES TO PETITION FOR REHEARING

Appendix I: (R-173-175.) From Deposition of John F. Olin:

"Q1. When you succeeded in preparing bis trifluoroethyl ether, what uses were obvious to you, based on its chemical structure and physical properties?

"A. It was expected that bis trifluoroethyl ether would be an anesthetic of low toxicity and flammability.

"Q2a. Did you expect bis trifluoroethyl ether to have any utility other than those in question 1?

"b. If so, what?

"A. Because of superficial similarity to the 'Freons' it was thought that bis trifluoroethyl ether might have use as a general solvent and specifically as an aerosol propellant composition.

"Q3. In your patent application you disclose that bis trifluoroethyl ether has useful solvent properties. Specifically, you state that it 'may be used to prepare

pastes or dispersions of high molecular weight fluorine compounds such as fluorocarbon waxes.'

"a. Did you ever prepare any pastes or dispersions in which bis trifluoroethyl ether was used as the dispersing medium.

"b. If so, what? and

"c. When?

"A. No.

"Q4. You also disclose in your patent application that bis trifluoroethyl ether may be used to soften or solubilize polymeric materials, e.g., synthetic fibers.

"a. Did you ever use bis trifluoroethyl ether to solubilize a synthetic material?

"b. If so, what synthetic material? and

"c. When?

"A. No.

"Q5. Did you ever test bis trifluoroethyl ether as a solvent for any material?

"a. If so, what? and

"b. When?

"A. No.

"Q6. You also disclose in your patent application that bis trifluoroethyl ether is chemically reactive and may be used in the preparation of other fluorinated compounds.

"a. Did you ever chemically react bis trifluoroethyl ether with another material?

"b. Did you ever prepare another fluorinated compound from bis trifluoroethyl ether?

"c. If so in either (a) or (b), state what and when.

"A. No.

"Q7. Do you know of any use for which bis trifluoroethyl ether is presently being used?

"A. Mr. Lyden informed me via telephone on October 10, 1962 that bis trifluoroethyl ether was of value in treatment of mental disorders. Aside from this I know of no present use.

"Q8a. Do you know of any records, such as your personal notes, where a proposed utility or an actual utility for bis trifluoroethyl ether is recorded?

"b. If so, where are these records? and

"c. When was the record made?

"A. All communications recording proposed utility were verbal.

"Q9a. Do you recall any conversations with anyone as to the utility of bis trifluoroethyl ether before or after the compound was prepared?

"b. If so, with whom? and

"c. When?

"A. Conversations with W. A. LaLande, Jr., indicated that contrary to expectations, bis trifluoroethyl ether was quite toxic and, hence, not suitable for anesthetic purposes (August 1955)."

APPENDIX II: (R-180.) FROM THE AFFIDAVIT OF ARTHUR H. NEELEY:

"To the best of my knowledge, hexafluorodiethyl ether is a novel compound, at least to the extent that it has never been known and prepared or any method for its preparation disclosed, prior to the above-mentioned Krantz and Croix application and the

applications of John F. Olin. I am aware of no practical or effective use for hexafluorodiethyl ether other than its use as a convulsant as disclosed in the Krantz and Croix application.

"On the basis of the extensive pharmacological and clinical investigations of hexafluorodiethyl ether with which I have been directly involved, it is my opinion that hexafluorodiethyl ether has no practical utility for any of the purposes alleged in the above-identified John F. Olin application because of its extreme stability and because of its potency as a convulsant."

(R.-186.) From the Affidavit of Christian A. Wamser:

"Based upo nthe extensive chemical investigation with hexafluorodiethyl ether with which I have been directly involved, including those tests referred to above, it is my opinion that the disclosure of the Olin applications affords no basis on which anyone skilled in the art could make any practical use of the compound hexafluorodiethyl ether.

"It would not be possible, in the light of the unusual properties of this material to predict or anticipate, on the basis of the John F. Olin disclosures, what fluorinated compounds might be prepared from hexafluorodiethyl ether or in what manner this compound could be treated to produce another product.

"Similarly, the disclosure, with respect to the solvent properties of hexafluorodiethyl ether, would be insufficient to enable use of hexafluorodiethyl ether for this purpose without prior research investigations, particularly in the absence of a disclosure of the extreme potency of this material as a convulsant."

Appendix III: (R-149.) From Stipulation of Facts:

"IV. As of the present date the only tests or investigations of the compound known as hexafluorodi-

ethyl ether conducted by the party Olin or by an agent acting on his behalf constitute the experimental work on mice made by Albert R. Latven. The results of these tests were reported by Albert R. Latven in letters dated August 18, 1955 and June 18, 1958, and reports attached thereto identified elsewhere as Olin Exhibit P and Latven Exhibit 4, respectively."

**APPENDIX VI**

**Olin Exhibit P**

Interference No. 91,447

August 9, 1955

Mr. N. D. Peschko
Pennsylvania Salt Manufacturing Company
Research and Development Division
Box 4388 Chestnut Hill P. O.
Philadelphia 18, Pa.

Re: NP—2077, Anesthetic Screen

Dear Mr. Peschko:

This is to confirm our phone conversation yesterday in reference to preliminary studies concerning "inhalation anesthetic activity" of NP-2077. Mice were used as the experimental animal, exposed to several concentrations of vapor in a sealed 20 liter chamber.

Effects were dramatic. Within 20 seconds, violent clonic convulsions appeared, terminating in an intense strychnine-like tonic spasm; relaxtion from the tonic spasm then followed accompanied by loss of the righting reflex for the remainder of the enclosure period. During the latter interval, continuous asymetric convulsive contractions of the legs and body were present; muscular relaxation was never evident. Progressive cyanosis terminated in respiratory failure and death following which rigor mortis appeared quite rapidly.

The foregoing effects were produced by extremely low concentrations of NP-2077:

0.0051 cc/l: severe muscular spasms, recovery.
0.0103 cc/l: occasional convulsions, recovery after 30 minutes exposure.

0.025 cc/l Above syndrone, death in 6 minutes in one instance, and several after a 30 minutes exposure in another.

0.077 cc/l above syndrone, all 5 mice dead between 2 and 5 minutes.

For comparative purposes, it may be pointed out that ethyl ether does not produce anethesia within 30 minutes at 0.15 cc/l, but does induce anethesia within that period of time at 0.20 cc/l.

Thus it is apparent that this compound is extremely toxic and is absorbed systemically within seconds following inhalation. WE URGE YOU TO TAKE EVERY PRECAUTION IN HANDLING THIS MATERIAL AND TO AVOID ACCIDENTAL INHALATION AT ALL COSTS. You can imagine what might happen if the glass container were accidentally dropped and broken on the laboratory floor.

Sincerely yours,

PHARMACOLOGY RESEARCH, INC.

A. R. LATVEN
Albert R. Latven

RPS/dir. dict.

## INDEX.


| | Page |
|---|---|
| SUMMARY OF ARGUMENT | 1 |
| ARGUMENT | 2 |
| I. The Petition Is Based Upon Unsupported Assumptions of Fact | 2 |
| II. There Has Been No Mistake of Law | 6 |
| III. The Public Interest Does Not Require the Granting of This Petition | 8 |
| CONCLUSION | 9 |
| APPENDIX—Pages 7-9 of The Handbook of Solvents, Scheflan and Jacobs, Tab 29 | 1a |


## TABLE OF CASES CITED.


| | Page |
|---|---|
| In re Manson, 333 F. 2d 234 (CCPA 1964) | 7 |
| Brenner v. Manson, 383 U. S. 519 (1966) | 1, 6, 8 |
| Telephone Cases, 126 L. Ed. 863 | 4 |

IN THE

# Supreme Court of the United States.

OCTOBER TERM, 1966.

No.

JOHN C. KRANTZ, JR. AND LOUISE SPEERS CROIX,
*Petitioners,*

*v.*

JOHN F. OLIN,
*Respondent.*

## RESPONDENT'S BRIEF IN OPPOSITION TO PETITION FOR A WRIT OF CERTIORARI.

### SUMMARY OF ARGUMENT.

Respondent opposes the granting of this Petition for the following reasons:

I. The Petition is based entirely upon assumptions of fact that are not supported by the record. The record is contrary to Petitioners' assertions that the uses described in Respondent's patent application are "sham" or "spurious" or "unsafe" for practical use.

II. There was no mistake of law as claimed by Petitioners; the alleged conflict with *Brenner v. Manson*, 383 U. S. 519 (1966), does not exist.

III. The public interest does not require consideration of this case; no new issues are presented that were not fully treated in *Brenner v. Manson.*

## ARGUMENT.

### I. The Petition Is Based Upon Unsupported Assumptions of Fact.

In the first question proposed by Petitioners (Petition, page 3), Petitioners ask:

> "I. Can the utility which is essential to make an invention patentable be supplied by sham recitations of a spurious utility for which the invention is practically useless?"

This question raises non-existent issues since the record is clear that the utilities recited in Respondent's application are neither "sham" nor "spurious" nor "practically useless."

Respondent's patent application contains the following statement concerning utility of the chemical compound in question (R. 1, T-11):[1]

> "The resulting new chemical compound of my invention, bis(2,2,2-trifluoroethyl)ether, is a colorless liquid which vaporizes readily at ordinary temperatures and has useful solvent properties. For example, it may be used to prepare pastes or dispersions of high molecular fluorine compounds such as fluorocarbon waxes. It may also be used to soften or solubilize polymeric materials, e.g. synthetic fibers. It is chemically reactive and may be used in the preparation of other fluorinated compounds."

Not only have Petitioners failed to demonstrate that the above statements concerning utility are "sham" or "spurious", they have instead proved, through their own experts, the truth of these statements. Petitioners' own experts have shown that the compound is indeed a solvent

1. Respondents adopt Petitioners' notation for citations to the Record. See the footnote page 1 of the Petition.

for, and effective in, the preparation of paste and dispersions of, "high molecular weight fluorine compounds such as fluorocarbon waxes." See R. 1, T-186 where Petitioners' expert states in an affidavit dated November 15, 1962 that:

> "Tests similar to those described in the preceding paragraph were conducted on three fluorinated synthetic polymeric materials, Kel-F Grease, Halocarbon Wax 1200 and Halocarbon Wax 600.[2] These three materials were found to be soluble in hexafluorodiethyl ether,[3] forming from 10% to 13% solutions."

Petitioners' expert Neely worked with pastes of Kel-F, a high molecular weight fluorocarbon compound, and reports this fact in his affidavit dated January 2, 1963 where he states *inter alia* (R. 1, T-181):

> ". . . paste dispersions of the agent were prepared including, for example, a dispersion of Kel-F (a commercial designation for trifluorochloroethylene polymer). The paste containing about 20% of the hexafluorodiethyl ether, . . .".

Petitioners' experts also proved, as stated in Respondent's patent application, that the compound "may be used to soften or solubilize polymeric materials, e.g. synthetic fibers." See for example the affidavit of Wamser dated November 15, 1962 (R. 1, T-185, 186) where Wamser states under oath:

> "A variety of nonfluorinated synthetic polymeric materials were exposed in a closed vessel to hexafluorodiethyl ether for a period of ten days. Polystyrene, Nylon, Mylar, Orlon, Dacron, Acrilan and Dynel were all found to be insoluble with no evidence of any softening or swelling. In the case of polyethylene and cellulose acetate, there was no evidence of solubility, although some softening or swelling of these materials

---

2. All three materials are fluorocarbon waxes.
3. The compound produced by the process in issue in this case.

were observed. Polyvinylidene chloride was found to be slightly soluble as evidenced by the appearance of non-volatile material in the liquid upon evaporation. Polymethacrylate was the only one of the nonfluorinated polymers tested that appeared to be significantly soluble in this agent."

It should be noted that Respondents make no claim in their patent application that the compound in question is a universal solvent. Wamser's work clearly demonstrates that the compound is a solvent for, and has a softening or solubilizing effect on a significant number of the polymeric materials tested.

In light of the work performed by Petitioners' own experts, there is no justification for Petitioners' stated conclusions that the uses described in Respondent's patent application are "sham" and "spurious". Petitioners seem to base their contention largely on the assumption that use as a solvent for the stated materials is not a "practical" use. Petitioners ignore the common knowledge that many chemical compounds have their principal, if not exclusive, economic value as solvents.

The Court of Customs and Patent Appeals (hereinafter referred to as CCPA) specifically held (R. 1, T-8a-10a), as had the Board of Patent Interferences (R. 1, T-23a-25a), that Respondent's statements of utility were properly included in Respondent's application and were adequate, citing the *Telephone Cases,* 126 L. Ed. 863 at page 990 (R. 1, T-9a).

In the second question proposed by Petitioners, they ask (Petition, page 3):

"II. Has an applicant for patent, who withholds from his application information essential for the safe use of the invention for the purpose recited in the application, made a sufficient disclosure to the patent office to form the basis of a complete and allowable application on which a valid patent can issue?"

This second question also presupposes facts that are not supported by the record. Petitioners contend that Respondent has withheld information essential for the safe use of the compound as a solvent. The sole basis for this contention is the report made by Respondent's pharmacologist, Dr. A. R. Latven, to the Respondent pointing out the toxic nature of the compound based on tests on mice exposed to an atmosphere containing the compound. Petitioners' apparent contention is that because of Olin's failure to include some statement in his application concerning the possible toxicity of the compound to humans, anyone attempting to employ the compound for its stated uses, (e.g. as a solvent for fluorocarbon compounds) might have difficulty in doing so because of the toxicity problem.

The difficulty with Petitioners' position is that there is no evidence in the record that the toxicity level of the compound is so high or unusual that it could not be safely used for all purposes described in Respondent's patent application, using only the reasonable precautions one would normally take with a volatile compound. There is nothing in the record to show that any of the original experimenters, who prepared and worked with the compound before its convulsant properties were known, suffered any ill effects from the compound. Nor is there any evidence that in the subsequent preparation and handling of the compound, there were any accidents involved in its use. Indeed the record shows that the compound is approved by the Federal Food and Drug Administration for administration to humans for psychiatric therapy purposes. In short, there is not a shred of evidence to support Petitioners' contention that the compound is so hazardous that it cannot be used as a solvent or for other purposes.

It is a well known fact, alluded to both by the Board of Patent Interferences and by the CCPA that many commercial solvents are dangerous to handle, but this does not prevent their use. See page 22a of the Petition where the Board of Interference Patent Examiners in a statement

specifically approved by the CCPA (See Petition page 7a) discuss this point as follows:

> "We cannot agree with Krantz et al.'s position that the subject matter of the Olin applications is dangerous to the public and for that reason cannot serve as constructive reductions to practice. The record is decidedly to the contrary. It shows that the compound was safely handled while it was being prepared, and used for experimental and testing purposes. * * * It is, therefore, unnecessary to explore this aspect of the case in any great depth. There is of record pages 7 to 23 of The Handbook of Solvents,[4] Scheflan and Jacobs, Tab 29, which are devoted to 'Safe Practices in the Use of Solvents.' On page 22, examples of labeling 'dangerous' solvents, recommended by the Manufacturing Chemists Association, are given. The handbook article shows that a good many solvents are more or less hazardous to use, but this fact alone does not prevent their use."

It is apparent from the foregoing that the "questions" proposed by Petitioners in this case raise fictitious issues based on assumed facts that do not find support in the record. For this reason alone, this Petition should be denied.

## II. There Has Been No Mistake of Law: There Is No Conflict With Brenner v. Manson.

The Petitioners contend (Petition page 14-16) that the Petition should be granted to correct a mistake of law. The basis for this contention is stated by Petitioners as follows: (Petition page 15 (bottom)):

> "Petitioners believe that the lower court tried and decided this case upon the basis that no disclosure of utility was necessary to the patentability of the process claim in issue."

---

4. See Appendix for pages 7-9 of the Handbook.

The most casual review of the CCPA's opinion in this case [5] shows immediately that Petitioners' belief is totally without foundation. It is clear beyond doubt that the CCPA carefully considered the statements of utility contained in Respondent's patent application and expressly found that those statements are accurate and adequate as proved by the tests carried out by Petitioners themselves. See page 5a (bottom) and page 6a (top) of the Petition where the CCPA refers to the statements in Respondent's patent application concerning utility. See also pages 6a, 7a, 8a and 9a of the Petition where Petitioners' contentions concerning the inaccuracy or inadequacy of Respondent's statement of utility are carefully considered and then rejected. On page 10a, the CCPA concludes as follows:

> "Clearly, Olin has complied with the law as set forth in the foregoing excerpt. The record shows that Speers produced pastes and solutions of fluorocarbon waxes, as pointed out above. Therefore, it is our view that the Olin cases are complete and allowable applications and that Olin is entitled to the filing date of his parent application, namely, December 29, 1955, for a constructive reduction to practice of the count; the Automatic Weighing Machine case, supra."

In taking the position that the CCPA decided this case on the ground that no utility disclosure is necessary, Petitioners contend that the Court must have been influenced by the arguments of Respondent's counsel with regard to the decision of the CCPA in *In re Manson,* 333 F. 2d 234 (CCPA 1964). The CCPA, however, did not adopt counsel's argument with respect to its holding in *In re Manson,* and indeed made no reference whatsoever to that decision. If the CCPA had relied upon *In re Manson* it would have been totally unnecessary for that Court to consider Petitioners' voluminous arguments directed solely to the inadequacy of Respondent's utility disclosures. The

5. Appendix II of the Petition, R. 1, T-3a et seq.

CCPA held *not* that a utility disclosure is unnecessary, but that Respondent had complied with the law by properly disclosing uses for the compound. The CCPA did not apply "the wrong ground rules" as contended by Petitioners, but applied the "ground rules" set forth by this Court in *Brenner v. Manson.*

It is apparent that the supposed conflict with *Brenner v. Manson* does not exist. *Brenner v. Manson* decided that a disclosure of utility for a compound whose uses are unknown is necessary to support a prima facie case for the patentability of the process for making the compound. Respondent's patent application does undeniably disclose uses for the compound in question. These uses have been held by the CCPA on the facts appearing in the record of this case to be correct and adequate.

The alleged "mistake of law" urged by Petitioners is another fictitious issue with no foundation in the record.

## III. The Public Interest Does Not Require the Granting of this Petition.

The Petitioners' urge (page 12-14 of their Petition) the granting of this Petition in the interest of putting an end to the supposed practice of reciting "spurious and sham" utilities in patent applications. The fundamental difficulty with Petitioners' contention is that they have not established, nor does the record support, the underlying premise that the uses stated in Respondent's patent application are, in fact, "sham" "spurious" and "not practical." The record establishes the contrary and the CCPA so held.

In view of *Brenner v. Manson,* no additional ruling by this court is necessary to establish the principle contended for the Petitioners, namely the principle that an adequate disclosure of utility is necessary to support patentability. In *Brenner v. Manson,* this court considered this issue in depth only last year and clearly stated its position. No further clarification of this Court's position on this point would result from the granting of this Petition.

## CONCLUSION.

The decision below is correct; no question warranting further review by this Court is presented, and there is no conflict of decisions. The petition for a writ of certiorari should be denied.

Respectfully submitted,

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and
WILLIAM M. EPES,
*Attorneys for Respondent.*

# *Chapter II*

# SAFE PRACTICES IN THE USE OF SOLVENTS

> "Safety . . . is teamwork between management and labor, between foreman and his crew, between operators and maintenance men, between one man and his buddy working alongside of him. It's the company providing the safest equipment and the employees providing the safest attitude."
>
> W. C. Uhl, *Petroleum Processing* **3**, 211 (1948).

As is well known, organic solvents are among the most commonly used chemicals in industry today. Some fifty years ago, the number of solvents employed and their relative quantities were rather small. Today, tons of a large variety of alcohols, ethers, ketones, petroleum and coal tar distillates, halogenated hydrocarbons, etc., are employed each year in all kinds of industries, such as lacquer, paint and varnish, plastics, dry cleaning, textile, printing, plating and many others.[1]

While all of these solvents are invaluable to modern industry, it must be recognized that solvents in general, like other chemicals and tools in general, are potentially hazardous. Nevertheless, just as an apparently safe operation or what is considered a non-hazardous chemical may cause accidents and death, so a most dangerous operation and a very toxic chemical may be employed with safety if adequate consideration is given to the proper handling of the potential danger. Thus solvents, even toxic solvents, can be handled with safety.

The search is still on for the "ideal" industrial solvent which does not burn, does not explode, does not cause dermatitis, is not toxic, and dissolves the greatest number of industrially employed inorganic and organic substances, including fats and oils. Until it has been discovered and made commercially available, we must take suitable precautions in the employment of solvents available at present.

According to Gordon,[2] a well-planned safety program for the safe handling of solvents consists of:

1. Identification of hazardous operations.
2. Analysis of the hazards.
3. Engineering controls.
4. Personal protection of employees.
5. Medical protection.
6. Supervision.
7. Employee education.

## Identification of Hazardous Operations

Occasionally a hazard has been discovered only after it has caused some more or less serious after-effects, but this is rarely the case today. Nowadays, information on the hazards of commonly employed industrial volatile solvents can be obtained very readily from the

[1] For a comprehensive tabulation of industrial uses of solvents, see T. C. Gregory, *Uses and Applications of Chemicals and Related Materials.* Reinhold, New York, 1939, 1944.

[2] L. Gordon, *Materials & Methods* **24**, 90 (1946).

literature, the manufacturers of solvents, local, state and federal industrial hygiene agencies, Underwriters' Laboratories, Factory Mutual Laboratories, some insurance companies, Industrial Hygiene Foundation, American Industrial Hygiene Association, American Medical Association, etc. Suitable plans can then be made for safe handling and proper controls.

It should be kept in mind, however, that American manufacturers often send out samples of new chemical products for experimental purposes before the completion of studies of all significant properties of the new material. In such cases, it is the custom to print an appropriate cautionary statement on the label which usually reads as follows: "The chemical, physical, and toxicological properties of this product have not yet been fully investigated and the handling or use may be hazardous. Exercise due care."

Several large manufacturers have toxicological laboratories which test each new chemical synthesized so that its relative toxicity is known before it is adopted for manufacture on a commercial scale. This knowledge of the relative toxicity of a new synthetic organic chemical permits its classification as to degree of toxicity and hence the precautions to be observed in its utilization.

The initial step should be a thorough survey of the plant to determine which solvents are used, when, where, how much, and how frequently. Such a survey must include all regular operations, the occasional overhauling of equipment, the cleaning of machinery, the disposal of solvent wastes, the storage and distribution of solvents, and the transfer of solvents to different containers and to various departments throughout the plant.

As a rough guide, the following classification of solvents patterned after that of MacGee, Weber, and Senter[3] is designed for laboratory and plant purposes. It classifies the solvents on the basis of their potential health hazard.

[3] A. E. MacGee, L. J. Weber, and C. H. Senter, *J. Am. Oil Chemists' Soc.* **25**, 279 (1948).

A. 1. Solvents which can be considered relatively harmless or which seldom cause injuries to the workmen's health after long association with them in everyday plant routine:

| | |
|---|---|
| pentanes | mineral spirits |
| petroleum ether | ethyl alcohol |
| petroleum benzine | ethyl chloride |
| hexanes | ethyl ether |
| heptanes | ethyl acetate |

2. Solvents which, even though considered to be somewhat toxic, because of their low volatility and usual conditions of use are seldom dangerous from a practical point of view:

ethylene glycol butyl glycol
dibutyl phthalate

B. Solvents which can be considered mildly hazardous or which can be endured by workmen for a short time within maximum permissible concentrations without serious disturbances or dangerous after-effects:

| | |
|---|---|
| toluene | trichloroethylene |
| xylene | perchloroethylene |
| cyclohexane | ethylene oxide |
| cumene | hydrogenated cyclic naphthas |
| cycloheptane | tetrahydronaphthalene |
| propyl acetate | nitroethane |
| amyl alcohol | |
| amyl acetate | |
| butyl alcohol | |

C. Solvents which can be considered as definitely hazardous or which cannot be endured by the workmen for even a short time except at extremely small concentrations without possibility of dangerous after-effects or injuring the ability to work:

| | |
|---|---|
| benzene | formaldehyde |
| carbon disulfide | phenol |
| carbon tetrachloride | nitrobenzene |
| methyl alcohol | dimethyl sulfate |
| tetrachloroethane | pentachloroethane |

### Analysis of the Hazards

In ordinary industrial operations in which organic solvents are involved, the worker may come in bodily contact with the liquid solvent or may inhale some of the vapors, either for a short time or for the whole working period. Although there are solvents which have only a very slight vapor pressure under ordinary conditions and, therefore, give off only low concentrations of vapors under these conditions, there are others which have an appreciable vapor pressure at room temperature and usually are readily recognizable by their odor. These latter solvents are commonly called "volatile" solvents. Typical examples of "nonvolatile" and "volatile" solvents are glycerol and acetone, respectively. It should be recognized that in the case of these volatile solvents there is the added potential hazard of the effect of solvent inhalation. Depending upon the nature of the solvent as well as the human element, exposure to solvents, both volatile and nonvolatile, may or may not cause illness. It has been pointed out that "the health hazard problem of industrial solvents can be separated into two parts, the one consisting of the relatively easy problem of protecting workmen against exposure to solvent liquid and extremely large concentrations of solvent vapor, and the other consisting of the relatively difficult problem of protecting workmen against exposure to comparatively small concentrations of solvent vapor or gas in the laboratory or plant atmosphere." Methods of taking care of these various health hazards are discussed later.

### Physiological Response

When vapors or gases are inhaled, they pass into the general circulation and are distributed to the heart and the central nervous system with a rapidity second only to that which occurs when they are injected into the veins. They can produce either a general toxic action without harm to the respiratory tract or a mixed effect, being generally toxic and locally irritant. Some vapors or gases act so violently in the upper respiratory system and lungs that their general toxic effects are secondary considerations. With few exceptions, all volatile solvents if inhaled in sufficient concentration for sufficient length of time are detrimental to health.

Occasionally, because of accidental spillage, carelessness, ignorance, or sabotage, the amount of vapor in the atmosphere may be extremely high and far above the maximum allowable concentration. Such an acute exposure may cause unconsciousness or even death if the individual is not promptly removed to an uncontaminated atmosphere and given proper medical attention.

**Chronic Exposure.**—Chronic exposure, i.e., repeated exposure or exposure for long periods of time to concentrations above the maximum allowable concentration values but below concentrations which cause discomfort rapidly, may first cause mild symptoms such as headache and fatigue, then nausea, intestinal, visual, or mental disturbances, and, finally, injuries to the blood, liver, kidneys, or other organs of the system.

**Classification of Physiological Action.** The physiological action of the industrial solvents is classified by Flury[4] under five main headings:

(1) General nerve poisons without other distinctly specific poisonous effects; to this group belong the primary alcohols (with the exception of methyl alcohol), ethers, aldehydes, ketones, and certain esters, and benzine.

(2) Lung poisons or irritants, that is, those substances which induce the phenomenon of inflammation in the tissues with which they come into immediate contact; the principal rep-

[4] K. B. Lehmann and F. Flury, *Toxikologie und Hygenie der technischen Loesungsmittel.* Springer, Berlin, 1938; (translated by) E. King and H. F. Smyth, Jr., *Toxicology and Hygiene of Industrial Solvents.* Williams & Wilkins, Baltimore, 1943. See also Morris B. Jacobs, *The Analytical Chemistry of Industrial Poisons, Hazards, and Solvents.* 2nd Ed., Interscience, New York, 1949.

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IN THE

# Supreme Court of the United States

OCTOBER TERM, 1966

No. 1044

JOHN C. KRANTZ, JR. and LOUISE SPEERS CROIX,
*Petitioners,*

v.

JOHN F. OLIN, *Respondent.*

## PETITIONER'S REPLY BRIEF

**On Petition for a Writ of Certiorari to the United States Court of Customs and Patent Appeals**

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PRESS OF BYRON S. ADAMS PRINTING, INC., WASHINGTON, D. C.

## INDEX


Page

Argument in Answer to Respondent's Brief ..... 1

APPENDIX:

Indoklon Instructions for Use ..... 1a


## CITATIONS


STATUTES:

35 U.S.C. § 112 ..... 4

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## PETITIONER'S REPLY BRIEF

**On Petition for a Writ of Certiorari to the United States Court of Customs and Patent Appeals**

---

### ARGUMENT IN ANSWER TO RESPONDENT'S BRIEF

A "sham" is defined as "a substitute, imitation, or counterfeit purporting to be the real thing."*

"Spurious" means "not genuine, counterfeit, false."*

---

* Webster's New International Dictionary, Second Edition (1953).

When Olin filed his patent application on December 29, 1955 he had no practical use, no utility, for his new compound. All he had was the Latven letter of August 9, 1955 (Olin Exhibit P, reproduced in Petitioners' Brief at pages 42a and 43a, Appendix VI) reporting the results of the tests of the new compound for its originally hoped-for use, as an anesthetic.

Not having any real or true utility, Olin included in his application a sham utility, one that looked like an actual and practical utility and was disclosed in a manner which would lead the Patent Examiner so to think. It was mere speculation presented in the guise of fact. It was completely unsupported by experimental evidence of any kind. In fact, the experimental evidence then available to Olin was to the contrary; Latven had reported to Respondent that the compound was "extremely toxic and is absorbed systematically within seconds following inhalation." Olin's disclosure of utility was a substitute, an imitation, a counterfeit purporting to be the real thing. It was misleading in two respects, (1) in what it said or implied that was not true and (2) in what it omitted that was known to Olin and would have been material and essential to one attempting to use the new compound for the purposes alleged in the Olin application. It was a sham.

Respondent's Brief attempts to perpetuate this sham by asserting that certain parts of the experimental work done by Petitioners for the purpose of this case, as reported in the affidavits of Petitioners' experts, Neeley and Wamser, show that there was some truth in the utility allegations made in the Olin application. This attempt should fail. True, the Wamser

and Neeley affidavits show that some solvent properties were present. Any liquid has some solvent action, but the affidavits of both these witnesses when considered as a whole show that the new compound would not be practically useful as a solvent. They prove that the solvent utilities alleged in the Olin disclosure are *not* real or genuine, but rather are spurious, mere shams or substitutes purporting to be a real thing.

Who would use as a solvent a compound having the toxic properties reported to Respondent in Latven's August 9, 1955 letter? Wamser and Neeley say no one would, as a practical matter. The record shows that the only known use is as a drug (following years of clinical testing by Petitioners), and the Federal Food and Drug Administration restricts such drug use only to competent physicians, as shown in the following excerpt from the instructions for use* shipped with each quantity of the drug:

> *Contraindications*
>
> Contraindications for Indoklon are similar to those for electroshock therapy. Indoklon should not be given to a patient with even a very mild upper respiratory infection. Indoklon should not be given to any patient with severe cardiovascular, hepatic, or renal disease. Indoklon should not be given to any patient with severe intraocular or intraspinal increase in pressure. Patients with abnormal body temperatures should be temporarily excluded from Indoklon therapy until the temperature returns to normal. Indoklon is not to be used with pregnant females, since no data is available to support its safe use in pregnancy.

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* A complete copy of these instructions is reproduced in the Appendix to this Reply Brief.

*Precautions*

Indoklon should be administered by a competent physician who is familiar with simple resuscitative procedure. It is recommended that it be administered in a hospital, or other place of treatment where restorative drugs, oxygen and resuscitation equipment are available. The legal formalities to be observed are identical with those employed in the administration of electroshock therapy, insulin coma therapy, or other similar types of psychiatric therapeutic treatments.

Respondent further attempts to prove the practicality of the alleged solvent utility of the new compound (in the absence of any experimental work by Respondent whatsoever) by comparing the new compound with the solvents listed as "definitely hazardous" in Chapter 2 relating to Safe Practices in the Handbook of Solvents. But the comparison falls short. Common, well-known substances such as benzene, methyl alcohol and carbon tetrachloride (listed as *definitely hazardous* in the Handbook) are not in the same category with respect to toxicity, or physiological effect, as the new compound of the Olin application. Olin knew when he filed his application that as little as .0051 cc/liter would cause severe muscular spasms in mice. He knew that his investigator Latven urged him to "AVOID ACCIDENTAL INHALATION AT ALL COSTS." At the very least he had the obligation, not only in the public interest but also to meet the requirements of 35 U.S.C. § 112, to include such essential information in his patent application. And it is no excuse to say (as Respondent suggests) that Latven was talking about mice, not men. It is simply incredible that Latven, when he imagined what might happen if a glass container of the new compound were accidentally broken by being dropped on the floor (Olin

Exhibit P) was concerned not about the human hazards involved but rather about the possibility that mice in the laboratory might be killed.

The situation here might be likened to a case wherein a patent application were filed on an explosive liquid such as nitro-glycerine based on the alleged utility of the liquid as a solvent and as a chemical intermediate, but completely omitting the essential information about the explosive qualities of the liquid. Any such patent application clearly would be "fatally" deficient in disclosure. So too is the case with respect to the subject Olin application.

## CONCLUSION

Certiorari should be granted for the reasons stated in the Petition which Respondent's Brief, properly understood, demonstrates rather than refutes.

Respectfully submitted,

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and
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March 16, 1967

# INDOKLON®

## FLUROTHYL

**(Bis(2,2,2-trifluoroethyl)ether)**

## A CONVULSANT AGENT FOR PSYCHIATRIC USE

A recent revival in pharmacologic convulsive therapy has been achieved through the discovery that seizures can be safely induced with the drug Indoklon, bis(2,2,2-trifluoroethyl)ether. The use of this ether for the treatment of psychiatric patients in whom convulsive therapy is indicated was first suggested when it was found that Indoklon evoked a convulsive action upon inhalation by laboratory animals. A subsequent comprehensive clinical evaluation demonstrated its usefulness as a safe agent for treatment of mental illness in man.[1]

The drug is administered by inhalation. The seizures are similar to convulsions elicited by electro-shock; but their onset is more gradual. It appears that the seizures are similar to those achieved by other convulsive techniques except that with Indoklon the clonic phase tends to last longer. However, at a cellular level the mechanism of the seizure as in other techniques has not been completely delineated. Indoklon is unique among the pharmacological agents commonly used to induce seizures since it is eliminated through the lungs.

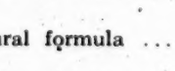
### PHYSICAL PROPERTIES[2]

Indoklon is an ether and from a structural point of view it is considered to be a fluorinated derivative of diethyl ether. It is known chemically as bis(2,2,2-trifluoroethyl)ether; it is sometimes referred to as hexafluorodiethyl ether.

Indoklon is a colorless volatile liquid having a pleasant ethereal odor. By vapor fractrometry analysis it has a purity of 99.6% or higher. No stabilizers are added. Its boiling point is 63.9°C and its specific gravity is 1.417 at 20°C. It is slightly soluble (0.2%) in water, but dissolves readily in ethyl alcohol and polyethylene glycol 300. Indoklon has an oil-water coefficient of 116. It is possible that this property is associated with its distribution in the brain and hence responsible for its stimulating effect.

Since Indoklon has a flash point of 104°F, by the "Tag Open Cup" method, it falls into the category of a combustible liquid as defined by the Manufacturing Chemists' Association code. Its vapor has a lower limit of flammability of 7% in dry oxygen and approximately 20% in dry air.

The physical properties of Indoklon are summarized in the following table:

| | | |
|---|---|---|
| Structural formula |  | |
| Molecular weight | 182.07 | |
| Boiling point | 63.9°C/760 mm. | |
| Freezing point | Below -80°C | |
| Refractive index | 1.2797 | $20^{\circ}C$ |
| Specific gravity | 1.417 | $\frac{20}{20}$ |
| Weight per gallon | 11.79 lbs. | 20°C |
| Flash point, Tag Open Cup | Approx. 40°C (104°F) | |
| Vapor pressure | 168 mm | 20°C |
| | 292 mm | 35°C |
| | 504 mm | 50°C |
| | 760 mm | 63.9°C |
| Solubility in water | 0.2% by weight | |
| Solubility of water in Indoklon | <0.1% by weight | |

### CHEMICAL PROPERTIES

Indoklon is an extremely stable organic ether. Unlike other ordinary ethers it does not undergo cleavage when treated with hydriodic acid and cannot be oxidized by the action of strongly acidified potassium dichromate solutions. In fact, no chemical reactions have been found that can be used as the basis of a method for the chemical assay of the drug. This extreme stability of Indoklon necessitates the utilization of purely physical methods in the analysis of mixtures for the identification and determination of the compound.

### ANIMAL EXPERIMENTATION

The first demonstration that Indoklon would cause convulsions was carried out on rats by Dr. John C. Krantz, Jr., of the University of Maryland, School of Medicine.[3] He observed that all species of animals exposed to Indoklon vapors convulsed with great rapidity. There seemed to be little species difference in the susceptibility or tolerance toward Indoklon in the dog, monkey, mouse or rabbit. It was subsequently determined that animal dosage levels could be extrapolated to man with negligible variation. It is remarkable that Indoklon evokes seizures in rats at concentrations as low as 30 ppm (wt./vol.) within 30 seconds. The Indoklon seizure is compatible with the administration of atropine sulfate, thiopental sodium and succinylcholine chloride.[4]

The cortical dysrhythmia evoked by Indoklon in the monkey can be blocked by placing the animal under the deeper planes of ether, Fluoromar or thiopental sodium anesthesia.[5]

The previous administration of reserpine lowers the threshold of the Indoklon seizure similar to that observed with electroshock therapy. The antipsychotic drugs of the phenothiazine series, e.g. chlorpromazine, also lower the threshold to electroshock or Indoklon convulsions.[4]

In addition to the foregoing studies, carried out at the University of Maryland, several studies at the University[6, 7] of Wisconsin were conducted on Sprague Dawley rats and mongrel dogs. In the more extensive tests, dogs from the same litter were selected. To determine if pathologic changes could be produced, members of each of these species were subjected to tests involving increase in the number or the duration that might be administered clinically. The tests were conducted in two series: In the first series Sprague Dawley rats and mongrel dogs were subjected to a ten to twenty fold increase in the number or the duration of convulsions as compared to the number or the duration that might be administered clinically.

Convulsions occurred in the dog after one inhalation and following one or two blood circulation times. Convulsions were produced 25 or more times in 4 animals. Indoklon was administered 3 or 4 times for 30-minute periods to 7 other dogs. The only pathologic changes noted in the study of these animals were: one instance of focal liver necrosis, one of periductule lymphocytic infiltration of the liver, and one of a fatty liver. Such changes could result from inadequate pulmonary ventilation and carbon dioxide accumulation. There were no significant changes in blood sodium, potassium or calcium levels.

Electroencephalographic changes were studied in dogs and consisted of maximal seizure patterns. Electrocardiograms revealed A-V nodal dissociation, ventricular extrasystoles, complete heart block and bigeminal rhythm. All arrhythmias returned to normal at the end of the treatment period. These changes are similar to those observed with other methods of convulsion therapy.

In the second comprehensive series of tests, 5 dogs were each given 100 successive treatments in dosages adequate to produce grand mal type of seizures as seen visually and recorded electroencephalographically. This was an increase of approximately 85 to 90 over the number that might be administered clinically. In this series of experiments pathologic changes also were shown to be minimal as evidenced by the examination of microscopic sections of the following from each of the 5 dogs: liver, spleen, kidney, adrenal, small intestine, ovary or testis, lungs and both right and left ventricular walls.

### CLINICAL PHARMACOLOGY

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As with EST, the muscular component of the seizures induced by Indoklon can be markedly mitigated by the previous injection of succinylcholine chloride (Anectine). Many clinics have confirmed the results obtained at the Spring Grove State Hospital,[9] Baltimore, Maryland, in studies on 60 patients given electroshock treatment and approximately the same number of patients given Indoklon treatments. All patients were screened physically and considered free from complicating medical disorders before treatment. The screening process consisted of a physical examination, X-ray of the chest and spine, electrocardiogram, routine urine, blood chemistry, hemotologic tests, and liver function tests consisting of cephalin flocculation and thymol turbidity. In the Indoklon group 720 treatments were given to the 60 patients and approximately the same number of treatments given in the EST series. Clinical observation at present indicates that there appear to be no differences in the clinical courses of either group of patients. The quantity of Indoklon needed to produce a convulsion by the inhalation technique averaged 0.5 ml. Tolerance was not noted with progressive treatments. Spasmodic clonic episodes with some degree of laryn-

pleasant ethereal odor. By vapor fractrometry analysis it has a purity of 99.6% or higher. No stabilizers are added. Its boiling point is 63.9°C and its specific gravity is 1.417 at 20°C. It is slightly soluble (0.2%) in water, but dissolves readily in ethyl alcohol and polyethylene glycol 300. Indoklon has an oil-water coefficient of 116. It is possible that this property is associated with its distribution in the brain and hence responsible for its stimulating effect.

Since Indoklon has a flash point of 104°F, by the "Tag Open Cup" method, it falls into the category of a combustible liquid as defined by the Manufacturing Chemists Association code. Its vapor has a lower limit of flammability of 7% in dry oxygen and approximately 20% in dry air.

The physical properties of Indoklon are summarized in the following table:

| | |
|---|---|
| Structural formula | F H H F<br>F-C-C-O-C-C-F<br>F H H F |
| Molecular weight | 182.07 |
| Boiling point | 63.9°C/760 mm. |
| Freezing point | Below -80°C |
| Refractive index | 1.2797 $^{20°C}$ |
| Specific gravity | 1.417 $\frac{20}{20}$ |
| Weight per gallon | 11.79 lbs. 20°C |
| Flash point, Tag Open Cup | Approx. 40°C (104°F) |
| Vapor pressure | 168 mm 20°C<br>292 mm 35°C<br>504 mm 50°C<br>760 mm 63.9°C |
| Solubility in water | 0.2% by weight |
| Solubility of water in Indoklon | <0.1% by weight |

## CHEMICAL PROPERTIES

Indoklon is an extremely stable organic ether. Unlike other ordinary ethers it does not undergo cleavage when treated with hydriodic acid and cannot be oxidized by the action of strongly acidified potassium dichromate solutions. In fact, no chemical reactions have been found that can be used as the basis of a method for the chemical assay of the drug. This extreme stability of Indoklon necessitates the utilization of purely physical methods in the analysis of mixtures for the identification and determination of the compound.

## ANIMAL EXPERIMENTATION

The first demonstration that Indoklon would cause convulsions was carried out on rats by Dr. John C. Krantz, Jr., of the University of Maryland, School of Medicine.[7] He observed that all species of animals exposed to Indoklon vapors convulsed with great rapidity. There seemed to be little species difference in the susceptibility or tolerance toward Indoklon in the dog, monkey, mouse or rabbit.[8] It was subsequently determined that animal dosage levels could be extrapolated to man with negligible variation. It is remarkable that Indoklon evokes seizures in rats at concentrations as low as 30 ppm (wt./vol.) within 30 seconds. The convulsion is promptly terminated by removal of the agent from the inspired air.

Repeated convulsions on subsequent days in dogs did not produce harmful effects. This was demonstrated by histologic studies of the lungs, brain, liver, kidney and bone marrow. Tolerance to the agent does not develop when rats are subjected to Indoklon seizures daily over 14 days. The convulsions are not mediated through hypoglycemic shock or the inactivation of cholinesterase. Electroencephalographic studies in monkeys and dogs with thiopental sodium anesthesia and muscle relaxation provided by succinylcholine chloride showed marked cortical dysrhythmias without skeletal muscle involvement. The multiple spike and the 3 to 4 second slow wave discharge that occurred first are followed rapidly by high voltage multiple spiking similar to that of monoclonic type (petit mal) epilepsy. Upon the elimination of Indoklon, the EEG pattern returned rapidly to normal.

Studies in dogs and monkeys show that the Indoklon seizure does not adversely affect the electrocardiogram. The blood pressure falls slightly during the seizure (10 to 15 mm.), but returns rapidly to normal with recovery. Indoklon vapors evoke only a slight irritation to mucous membranes. Mild chemosis of the conjunctiva of the rabbit is evoked when Indoklon dissolved in oil is instilled in the rabbit's eye. In a comparative study the degree and duration of the Indoklon chemosis was found to be not greater than that elicited by ethyl ether.

Indoklon is a respiratory stimulant in subconvulsive doses. This action is principally central in origin, rather than a reflex response from the pharyngeal region which prevails upon ether inhalation. Metabolism studies were conducted on rat's brain hemogenates. Prior to and immediately following Indoklon-induced convulsion, the oxygen uptake of the rat's brain was determined by the Warburg technique. No statistically significant differences were noted. This indicates that single exposures to Indoklon do not irreversibly affect the gaseous metabolism of the brain.

Experiment on dogs and monkeys and clinical trials with human beings have shown that the [illegible] times. Convulsions were produced 25 or more times in 4 animals. Indoklon was administered 3 or 4 times for 30-minute periods to 7 other dogs. The only pathologic changes noted in the study of these animals were: one instance of focal liver necrosis, one of periductule lymphocytic infiltration of the liver, and one of a fatty liver. Such changes could result from inadequate pulmonary ventilation and carbon dioxide accumulation. There were no significant changes in blood sodium, potassium or calcium levels.

Electroencephalographic changes were studied in dogs and consisted of maximal seizure patterns. Electrocardiograms revealed A-V nodal dissociation, ventricular extrasystoles, complete heart block and bigeminal rhythm. All arrhythmias returned to normal at the end of the treatment period. These changes are similar to those observed with other methods of convulsion therapy.

In the second comprehensive series of tests, 5 dogs were each given 100 successive treatments in dosages adequate to produce grand mal type of seizures as seen visually and recorded electroencephalographically. This was an increase of approximately 85 to 90 over the number that might be administered clinically. In this series of experiments pathologic changes also were shown to be minimal as evidenced by the examination of microscopic sections of the following from each of the 5 dogs: liver, spleen, kidney, adrenal, small intestine, ovary or testis, lungs and both right and left ventricular walls.

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Electrocardiograph tracings obtained from patients before and during seizures with Indoklon were compared with a group of tracings obtained from the electroshock patients.[12] There were no significant differences. Routine blood and urine examinations have remained consistently negative. The cephalin flocculation and thymol turbidity tests for liver function showed no changes from the base line following Indoklon therapy.

A group of 33 patients (27 women and 6 men) was studied for a period up to 14 months.[13] Their ages ranged from 21 to 65 years. The majority were between the ages of 30 and 50. The average number of treatments given to each patient was 12. A total of 409 treatments were given, 220 of which were given to ambulatory patients. It was found that the patients preferred outpatient treatments to intramural treatments, and whenever possible, this preference should be taken into consideration. In cases of lack of reliable supervision of the patient in the period between treatments, hospitalization of the patients is mandatory.

A series of experiments were run to determine the manner in which Indoklon is eliminated from the body. It was found in 8 determinations[14] that approximately 50% of the drug, injected in a single treatment, was eliminated unchanged through the respiratory system in 30 minutes. The experiments were not carried for a longer time since it was undesirable to carry these patients under anesthesia for a longer period of time. It is believed, however, that due to the extreme chemical stability of Indoklon, the remainder of the drug is eliminated in the same manner following the initial 30 minute period.

## ADMINISTRATION BY INHALATION[14, 15, 16, 8]

The pure Indoklon is supplied in 2 cc and 10 cc ampules, packaged six ampules to a box. For administration, a 5-liter bag attached to the oxygen supply is connected to the Indoklon vaporizer. The vaporizer is, in turn, connected to the face mask. Two ml. of Indoklon are introduced into the vaporizer and the bag is partially inflated with oxygen. The connection to the oxygen supply is maintained during inflation. Some examiners give the Indoklon without other premedication.[11] For those who wish, the following technique of premedication can be used but is not essential. A volume of atropine sulfate solution equivalent to 1/75 grain of (0.8 mg) is injected intravenously through a 22-gauge needle. By leaving the needle *in situ*, the syringe containing the atropine is removed and a syringe containing 10 cc of a 1% solution of methohexital (Brevital sodium) is connected to the needle in the vein. Eight to 10 ml. of this solution are usually adequate to anesthetize the patient for a few minutes. The methohexital syringe is removed and a syringe containing succinylcholine chloride (Anectine) is attached and the drug administered immediately. The amount used depends on the muscular development of the patient and may vary from 15 to 20 mg. for a woman of average weight to 20 to 40 mg. for an average weight man. In exceptional cases a larger amount may be required.

An adult rubber Guedel oral pharyngeal airway is then inserted. The face mask is placed tightly on the face and the bag is gently squeezed, forcing the oxygen-Indoklon mixture into the lungs at the rate of one inhalation every five seconds. The patient rebreathes into the bag. The usual number of inhalations required to cause convulsions may vary from four to six. Only rarely is it necessary to refill the bag with oxygen. The seizure usually occurs within 40 seconds, thus utilizing the maximal effect of succinylcholine chloride. The onset of the seizure depends upon the blood circulation time and the time required for the maximum Indoklon effect. This is usually less than 1 minute. The tonic phase of the seizure is over in ten to thirty seconds, but the clonic phase lasts for approximately 1 minute. In almost all patients respiration starts at the termination of the clonic phase. No period of apnea, as seen almost routinely in electroshock therapy, has been noted with Indoklon.

In a certain series, two patients, one of whom was an epileptic, had a second convulsion immediately after the termination of the first. This can be avoided by administration of the minimal amount of Indoklon necessary to produce a seizure.

Since the patient is resuscitated during the administration of the drug, some investigators have found it unnecessary to continue this treatment following the seizure. Others continue resuscitation until the effects of the succinylcholine chloride have completely disappeared.

Nevertheless, it is recommended that equipment for administration of oxygen resuscitation be available should this treatment be necessary, in cases of collapse and respiratory failure.

The inhalation method has the advantage of facilitating control of the amount of oxygen mixed with the Indoklon vapor. At the same time, the manual pressure on the oxygen-filled bag permits the Indoklon vapor to be forced into the lungs of the anesthetized patients without over-saturating them. This technique ensures proper timing of the convulsion, and enables the patient to benefit from the mitigating effect of succinylcholine chloride. It is important not to use too much oxygen because excess oxygen in the Indoklon mixture delays the onset of the convulsion resulting in a loss of effect from the muscle-relaxing agent.

It has been noted that many patients who object strongly to electroshock therapy accept Indoklon because of the assurance that no electricity will be used during the course of these treatments. It is, of course, also true that some patients who object to Indoklon accept electroconvulsive therapy. This is a matter which has to be worked out between the physician and his patient.

The procedure is simple and safe. The presence of an anesthesiologist is not essential for the proper administration of Indoklon.

## COMPATABILITIES AND INCOMPATABILITIES

No known incompatabilities with Indoklon have been reported. Antidotal studies in rats were conducted to attempt to combat the convulsive syndrome. In 6 animals 30 mg./kg. of pentobarbital sodium injected intraperitoneally prior to exposure provided complete protection against a concentration of 30 ppm of Indoklon. Thiopental sodium likewise afforded protection in 4 animals. Ether anesthesia prevented the convulsive syndrome in 4 animals, and Fluoromar® anesthesia was likewise effective in 4 animals.

## CONTRAINDICATIONS

Contraindications for Indoklon are similar to those for electroshock therapy. Indoklon should not be given to a patient with even a very mild upper respiratory infection. Indoklon should not be given to any patient with severe cardiovascular, hepatic, or renal disease. Indoklon should not be given to any patient with severe intraocular or intraspinal increase in pressure. Patients with abnormal body temperatures should be temporarily excluded from Indoklon therapy until the temperature returns to normal. Indoklon is not to be used with pregnant females, since no data is available to support its safe use in pregnancy.

## PRECAUTIONS

Indoklon should be administered by a competent physician who is familiar with simple resuscitative procedure. It is recommended that it be administered in a hospital, or other place of treatment where restorative drugs, oxygen and resuscitation equipment are available. The legal formalities to be observed are identical with those employed in the administration of electroshock therapy, insulin coma therapy, or other similar types of psychiatric therapeutic treatments.

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JOHN F. DAVIS, CLERK

IN THE

# Supreme Court of the United States

OCTOBER TERM, 1966

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No. 1044

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JOHN C. KRANTZ, JR. AND LOUISE SPEERS CROIX,
*Petitioners,*

v.

JOHN F. OLIN, *Respondent.*

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## PETITION FOR REHEARING

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W. BROWN MORTON, JR.
and
H. HUME MATHEWS,
*Attorneys for Petitioners*

MELFORD F. TIETZE,
*Of Counsel*

April 12, 1967

PRESS OF BYRON S. ADAMS PRINTING, INC., WASHINGTON, D. C.

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## PETITION FOR REHEARING

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Petitioners pray for a rehearing of their Petition for Certiorari to the United States Court of Customs and Patent Appeals (C.C.P.A.) filed in this Court on March 10, 1967, and denied by this Court on March 27, 1967.

Grounds for this petition are that a majority of the C.C.P.A. has, within the month, in the *Kirk* and *Joly* decisions (reprinted here in the Appendix) explicitly reversed that Court's pre-*Brenner* v. *Manson*, 383 U.S. 519 (1966) views of the sufficiency of minimal, artificial or spurious utility that formed the basis for its decision in this case.

searcher did not know this compound was useful in treating their disease.

For these reasons the petition for certiorari should be granted, the Order below vacated, and the case remanded.

Respectfully submitted,

W. BROWN MORTON, JR.
and
H. HUME MATHEWS,
*Attorneys for Petitioners*

MELFORD F. TIETZE,
*Of Counsel*

April 12, 1967

**CERTIFICATE**

I hereby certify that I have this 12th day of April, 1967, served a copy of Petitioners' Petition for Rehearing by mailing a copy thereof by first class mail, Postage Prepaid, to each of the following Attorneys for Respondent:

Dexter N. Shaw, Esq.
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Philadelphia, Pa. 19109

and

William M. Epes, Esq.
Pennsalt Chemicals Corporation
900 First Avenue
King of Prussia, Pa. 19406

I hereby further certify, pursuant to Rule 58, that this petition for rehearing is presented, not for the purpose of delay, but with a good faith belief in its merits and that the petition is restricted to the grounds presented by the decisions of the United States Court of Customs and Patent Appeals published March 16, 1967, in cases Nos. 7472 and 7522, which were published in Volume 153, No. 1, of the advance sheets of the United States Patent Quarterly, dated April 3, 1967, and which were received in this office and came to my attention on April 5, 1967.

W. BROWN MORTON, JR.

April 12, 1967

## APPENDIX

UNITED STATES COURT OF CUSTOMS AND PATENT APPEALS

October Term, 1966

Patent Appeal No. 7522

Serial No. 796,749

In the Matter of the Application of

DAVID NEVILLE KIRK AND VLADIMIR PETROW

March 16, 1967

WORLEY, Chief Judge.

This appeal is from the decision of the Board of Appeals affirming the rejection of claims 11, 25, 26, 28, 29, 39, 41 and 45 in appellants' application[1] entitled "1-Dehydro-6-Methyl Steroid Compounds."

Each claim defines a specific steroid compound, claim 11 relating to a compound of the spirostane series; claims 25, 26, 28, 29 and 45 to compounds of the androstane series; and claims 39 and 41 to compounds of the pregnane series. It is unnecessary to reproduce any claim since the nature of the compounds will become apparent.

The Patent Office rejected all claims for failure of the specification "to comply with 35 USC 101 and 112." As we view the record, we are concerned with not only the legal adequacy of appellants' disclosure of "how to use" the claimed compounds under 35 USC 112,[2] but also the legal

---

[1] Serial No. 796,749, filed March 3, 1959.

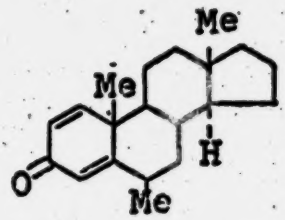
[2] 35 USC 112 reads in pertinent part:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

adequacy of assertions of usefulness in the original specification under 35 USC 101.[3] We are particularly concerned with the applicability of the decision of the Supreme Court in *Brenner* v. *Manson*, 383 U.S. 519, to the facts here.[4]

The appropriate starting point for disposition of those issues is appellants' specification, which begins with several general statements as to how the claimed compounds are useful:

> It is an object of the present invention to provide a process for the conversion of 3-oxo-$\Delta^4$-6-methyl and 3-oxo-$\Delta^{4,6}$-6-methyl steroidal derivatives into the corresponding 1-dehydro-derivatives which are a new class of compounds *often possessing high biological activity.*
>
> The present invention provides new 1-dehydro-derivatives of 3-oxo-$\Delta^{4,6}$-6-methyl and certain 3-oxo-$\Delta^4$-6-methyl steroids having the formula




[3] 35 USC 101 reads in pertinent part:

> Whoever invents or discovers any new and *useful* process, machine, manufacture, or *composition of matter*, or any new and useful improvement thereof, may obtain a patent therefor, *subject to the conditions and requirements of this title.* (Emphasis supplied)

[4] This appeal was originally argued December 7, 1965, some three months prior to the decision in *Brenner* v. *Manson* on March 21, 1966. On November 10, 1966, this court restored the appeal to the calendar for reargument, and requested counsel to file memoranda "on the effect, if any, of *Brenner* v. *Manson* * * * on this appeal." Argument on that question was heard December 5, 1966.

(with or without a double bond at the 6:7 position) which 1-dehydro-derivatives are of value *on account of their biological properties* or *as intermediates in the preparation of compounds with useful biological properties* as herein indicated or as is apparent to those skilled in the art.

* * * * *

The invention also provides the following new steroidal 6-methyl-1:4-dien-3-ones and 6-methyl-1:4:6-trien-3-ones which are of value *in steroid technology, in the furtherance of steroidal research and in the application of steroidal materials* to veterinary or medical practice, whether as tablets, elixirs, injections, implants, or other types of pharmaceutical preparation well known to those skilled in the art. (Emphasis supplied)

The description continues with lists of specific compounds of the cholestane, spirostane, androstane and pregnane steroid series together with a recital of "uses" for the compounds recited in the lists. Two compounds of the spirostane series are disclosed, one of which, 6-hydroxy-6-methyl-25D-spirosta-1:4-dien-3-one, is the subject of claim 11. They are said to be

* * * of value *as intermediates in the preparation of 6-methylated aromatic steroid hormones* into which intermediates they may be converted by reaction in solution in acetic anhydride with toluene-*p*-sulphonic acid. (Emphasis supplied)

Eighteen compounds of the androstane series are disclosed. The five recited in the claims are

17$\beta$-Hydroxy-6:17$\alpha$-dimethylandrosta-1:4:6-trien-3-one [Claim 45]

17$\alpha$-Ethynyl-17$\beta$-hydroxy-6-methylandrosta-1;4:6-trien-3-one [Claim 25]

17β-Acetoxy-4:6α-dimethylandrosta-1:4-dien-3-one [Claim 26]

9α-Fluoro-11β:17β-dihydroxy-6α:17α-dimethylandrosta-1:4-dien-3-one [Claim 28]

17β-Hydroxy-6α-methyl-17α-(prop-l-ynyl) androsta-1:4-dien-3-one [Claim 29]

They are said to be

> * * * of value *as intermediates in the preparation of 6-methylated aromatic steroidal hormones,* into which they may be converted by reaction in solution in acetic anhydride with toluene-*p*-sulphonic acid, *as intermediates in the preparation of biologically active compounds and in some cases on account of their biological properties.* (Emphasis supplied)

Some sixteen compounds of the pregnane series are disclosed, including the two compounds of claims 39 and 41,

6α-Methyl-16α:17α-*iso*propylidenedioxy-pregna-1:4-diene-3:20-dione [Claim 39] and

20:20-Bisethylenedioxy-6α-methylpregna-1:4-dien-3-one [Claim 41].

They are alleged to be

> * * * of value *as intermediates in the preparation of compounds with valuable biological properties such as progestational properties or properties associated with the adrenocortical hormones or as intermediates in the preparation of compounds with useful biological properties.* (Emphasis supplied)

Appellants' arguments are, in the main, two-fold. They first contend that the specification is adequate to comply with § 101 and § 112 because it discloses that the claimed compounds "have present and useful biological activity of

the nature known for analogous steroidal compounds," and that "one skilled in the art would know how to use the compounds of the claims to take advantage of their presently-existing biological activity." The second argument is that the specification adequately discloses that the compounds "have use as intermediates in the production of aromatic steroidal hormones and other biologically useful compounds," and that the examiner has admitted one skilled in the art would know how to use the claimed compounds as intermediates for that purpose. The respective arguments present somewhat different considerations, and will be discussed separately.

I. *The Asserted "Therapeutic" or "Biological" Activity*

In his final rejection, the examiner stated:

> All the claims are again rejected as lacking adequate utility. The disclosure fails to indicate to one skilled in the art how one is to use the novel compounds of this invention. The therapeutic properties are stated in such general terms i.e., "useful biological properties", that it fails to convey any useful information to one skilled in the art and further fails to state which of the claimed compounds have a therapeutic activity. * * *

In response, appellants submitted arguments that the rejection "is not warranted," and also submitted an affidavit of one of the applicants, a Dr. Petrow, which appellants summarized in a letter accompanying the affidavit and substantially reiterate in their brief here:

> Attached hereto is an affirmation of Vladimir Petrow which shows that one skilled in the art would be able to determine the biological uses of the claimed compounds by routine tests. The Petrow affirmation specifically shows that * * * [the steroid of] (Claim 25) in the well-known McPhail modification of the Clauberg

Assay possesses progestational activity on oral administration. The natural hormone, progesterone, on the other hand shows no response on oral administration in the same test. Accordingly, it is quite evident that the compound of claim 25 is a valuable oral progestational agent. This affirmation, accordingly, is proof of the fact that one skilled in the art would have no difficulty in determining whether *or not* the 1-dehydro derivatives of the pregnane series, as claimed, have value biologically as progestational agents. (Emphasis supplied)

In addition, the Petrow affirmation * * * discloses the determination of the anabolic activity of * * * the compound of claim 26. It is shown by standard test procedure that this compound does have anabolic activity and that, in addition, it has a much higher anabolic/androgenic ratio than that of testosterone propionate, a well-known anabolic agent. * * *

Further * * * the oral progestational activity of * * * the compound of claim 39, is set forth by virtue of *well-known test procedure.* This pregnane derivative is shown to be approximately 4 times as active progestationally on oral administration as * * * a well-known oral progestational agent. * * * by means of other tests the compound of claim 39 has been found to have valuable anti-inflammatory activity greater than that of either cortisone acetate or hydrocortisone. By virtue of a further standard test procedure the gluco corticoid activity of the compound of claim 39 has been shown to be more than 10 times that of cortisone and hydrocortisone acetates.

The affirmation of Dr. Petrow not only shows that the compounds claimed do have biological activity as asserted in the specification, but that the nature of such biological activity can be readily determined by

those skilled in the art by reason of standard test procedures.[5]

Appellants' affidavit and argument went for naught, the examiner responding that

> * * * the final rejection of all the claims in the case as lacking an adequate disclosure of utility is deemed sound and adhered to. * * *

In his Answer before the board, the examiner rejected the claims

> * * * as failing to comply with 35 U.S.C. 101 and 112 in that the specification fails to teach those skilled in the art how to use the invention. * * *

After reviewing the various passages of appellants' specification relating to the uses of the claimed compounds and "how to use" them, he concluded:

> * * * nowhere is there found a *specific* allegation of utility for any compound within the scope of the claims. Thus the specification does not describe the manner in such full, clear, concise and exact terms as to enable one skilled in the steroid art to use the compounds of the instant invention. * * * Appellants have not listed one specific use for their claimed steroids and as those skilled in the art know steriods are susceptible to hundreds of uses. *What appellants are really saying to those in the art is take these steroids, experiment, and find what use they do have as medicines.* (Emphasis supplied)

With regard to the Petrow affidavit, the examiner stated:

> * * * it may be that oral progestational activity can be determined by procedures well known in the art.

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[5] The record shows that the "standard test procedures" involved the use of laboratory animals, specifically rats and rabbits.

> * * * Once one knows that a compound does have utility as a progestational agent, it is of course merely routine to determine at what doses this activity exists. In other words, if in the specification as filed there had been a specific allegation that the compounds herein claimed had progestational activity this would have been sufficient to satisfy 35 U.S.C. 112, since those skilled in the art would know how to use a steroid possessing progestational activity. Thus, the aforementioned affidavit is not determinative of the issue at bar which is if the specification as filed does not allege a specific utility would one skilled in the art know how to use the invention?

The board agreed, adding that the reference in the specification to "biological properties" of the claimed compounds "is so general and vague as to be meaningless." It found in the specification no reason to expect that any of the claimed compounds "presents the probability of usefulness in the same manner as a natural hormone."

Appellants rely on the allegations in their specification that the disclosed compounds have "biological activity" as adequate disclosure of a use for the claimed compounds, stating:

> The disclosure teaches that the novel compounds are, in some cases, of value because of their presently existing biological activity. The application * * * teaches that such *steroidal* materials may be applied to veterinary or medical practice in the form of tablets, elixirs, injections, implants or other pharmaceutical preparations. In other words, the compounds in question are to be used *in the manner of other steroid hormones* in veterinary or medical compositions.

They also rely on the Petrow affidavit as evidence of the proposition that one skilled in the art would know how to use the claimed compounds, and assert that "the Board

erroneously, completely ignored the Petrow affirmation confirming present useful hormonal activity of some of the compounds * * *."

We are not persuaded by appellants' arguments that their specification meets the requirements of §§ 101 and 112. It seems to us that the nebulous expressions "biological activity" or "biological properties" appearing in the specification convey no more explicit indicatfon of the usefulness of the compounds and how to use them than did the equally obscure expression "useful for technical and pharmaceutical purposes" unsuccessfully relied upon by the appellant in *In re Diedrich*, 50 CCPA 1355, 318 F.2d 946, 138 USPQ 128.[6]

Nor does the Petrow affidavit help appellants' cause here. While that affidavit may show that three of appellants' claimed compounds do *in fact* possess specific anabolic, anti-inflammatory or glucocorticoid activity or usefulness as oral progestational agents, that is not the issue before us. It is what the compounds are *disclosed* to do that is determinative here. In that regard, it is appropriate to note that the specification does not even intimate that the claimed compounds of the spirostane and pregnane series *themselves* have "biological activity," much less the specific progestational, glucocorticoid or anti-inflammatory activities mentioned in the affidavit. With respect to the eighteen androstanes that are disclosed, five of which are claimed here, it is said they "are of value * * * *in some cases* on account of their biological properties." (Emphasis supplied.) There is no suggestion

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[6] There this court affirmed the rejection of certain claims for failure of an application to comply with section 112, noting that it had no "*specific* disclosure as to just *how* the compounds are to be *used*."

*which* androstanes are of value for that reason, or *what* biological properties make them useful.[7]

Thus we agree with the solicitor that appellants' affidavit is simply an *ex post facto* affirmation irrelevant to the issue of adequacy of the original disclosure inasmuch as it attempts to add statements of usefulness to the disclosure of the application as filed. Indeed, the sum and substance of the affidavit appears to be that one of ordinary skill in the art would know "how to use" the compounds to find out in the first instance whether the compounds *are—or are not—in fact* useful or possess useful properties, and to ascertain what those properties are. It amounts to an admission that experimentation would be necessary to determine actual uses—or possible lack of uses—of the compounds, as well as how to employ them in a useful manner. But surely Congress intended § 112 to presuppose *full satisfaction* of the requirements of § 101. Necessarily, compliance with § 112 requires a description of how to use presently useful inventions, otherwise an applicant

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[7] Appellants also rely on this court's decision in *In re Hitchings*, 52 CCPA 1141, 342 F.2d 80, 144 USPQ 637; *In re Dodson*, 48 CCPA 1125, 292 F.2d 943, 130 USPQ 224; *In re Krimmel*, 48 CCPA 1116, 292 F.2d 948, 130 USPQ 215; and *In re Bergel*, 48 CCPA 1102, 292 F.2d 955, 130 USPQ 206, for the proposition that usefulness of compositions of matter under § 101 may be established by an appropriate demonstration that the composition has useful properties or activities when tested in laboratory animals. Appellants correctly point out that the Supreme Court in *Brenner* v. *Manson* neither approved nor disapproved the reasoning and conclusions of those cases, 383 U.S. 531. However, appellants' reliance on those cases here appears misplaced. In those cases, the inventors had carried their invention substantially further than appellants here, pharmacological testing having proceeded to an extent that some particular salutary effects on conditions inimical to animals could be ascribed to the compounds in issue there. The general results of those tests were disclosed in the application as filed, in contrast to the situation here. See also *Archer* v. *Papa*, 46 CCPA 835, 265 F.2d 954, 121 USPQ 413; *Blicke* v. *Treves*, 44 CCPA 753, 241 F.2d 718, 112 USPQ 472.

would anomalously be required to teach how to use a useless invention. As this court stated in *Diedrich*, quoting with approval from the decision of the board:

> We do not believe that it was the intention of the statute to require the Patent Office, the courts, or the public to play the sort of guessing game that might be involved if an applicant could satisfy the requirements of the statutes by indicating the usefulness of a claimed compound in terms of possible use so general as to be meaningless and then, after his research or that of his competitors has definitely ascertained an actual use for the compound, adducing evidence intended to show that a particular specific use would have been obvious to men skilled in the particular art to which this use relates.

As the Supreme Court said in *Brenner* v. *Manson*:

> * * * a patent is not a hunting license. It is not a reward for the search, but compensation for its successful conclusion. * * *

Appellants further argue that the board had no grounds for concluding there was "no definite expectation from the specification" that any one of the claimed compounds "presents the probability of usefulness in the same manner as a natural hormone." According to appellants, "The analogy to known natural and synthetic hormones [presumably appellants intend to draw an analogy in chemical make-up or constitution between the claimed compounds and, for example, the natural hormone progesterone] enables one to predict that the new compounds would possess similar hormonal activity." Moreover, since some of the disclosed compounds of the pregnane series, not claimed here, were stated in the specification to be of value on account of their hydrocortisone-like anti-inflammatory properties, appellants contend that "it would not be unreason-

able to predict that others of this series [i.e. the claimed pregnane derivatives] would also have this property."

Similar arguments were advanced before, and rejected by, the Supreme Court in *Brenner* v. *Manson,* 383 U.S. at 531-2. We find no error in the board's position on the facts of this case, absent a disclosure in the specification that the requisite properties of the *claimed* compounds are also similar to those of a natural or synthetic hormone of known activity. Appellants' arguments fail to recognize that many steroid compounds may possess no activity whatsoever. It cannot be presumed that a *steroid* chemical compound is "useful" under § 101, or that one of skill in the art will know "how to use" it, simply because the compound is closely related only in a structural sense to other steroid compounds known to be useful. Cf. *In re Adams,* 50 CCPA 1185, 316 F.2d 476, 137 USPQ 333, dissenting opinion.

We conclude that appellants' specification does not comply with § 101 and § 112 merely on the statements of "biological" activity recited therein.

II. *The Asserted Usefulness as an "Intermediate"*

As can be seen from the portions of the specification quoted earlier, appellants disclose that the claimed spirostane and androstane derivatives may be used as intermediates in the formation of 6-methyl aromatic steroids, and that the claimed pregnane derivatives may similarly be employed to produce steroids having "progestational properties" or "properties associated with the adrenocortical hormones."[8]

[8] The disclosure with respect to the claimed pregnanes was characterized by the board as "even less helpful as to the manner in which these compounds may be used." We note, as did the solicitor that appellants do not *disclose* either broadly or specifically what steroids having "progestational" or "adreno-cortical" properties may be produced from the claimed pregnanes. There is no hint

The examiner has conceded that "those skilled in the art would know how to produce aromatic steroids" from the claimed compounds. However, he did not believe the inquiry into the adequacy of the disclosure should stop there, noting:

> * * * As to the portions of the disclosure which indicates that the claimed compounds are useful as intermediates in the production of 6-methylated aromatic steroids, *applicants have failed to show even one useful aromatic steroid which corresponds to the claimed intermediates. In other words, applicants' statement of utility is to the effect that the novel compounds claimed herein are useful in making other novel compounds which have no known use.* In the Examiner's opinion this is not sufficient nor does the Examiner know of any decision holding that such a statement is adequate. (Emphasis supplied)

Appellants contend that the examiner's holding[9] "is straight into the teeth" of the decision of this court in

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in the disclosure as to what additional molecular substituents, if any, must be present in the steroids to be produced from the claimed pregnanes to obtain the recited properties. Nor do appellants direct our attention to *any* specific compound, possessing some specific property and known to the art at the time they filed their application, which can be prepared from the claimed pregnanes.

[9] It is interesting to compare the rejections voiced by the examiner and board and summarized by the solicitor in *Nelson*, 47 CCPA 1037-9, 280 F.2d 176-7, 126 USPQ 247, with those raised here. For all intents and purposes, the rejections are identical. Although the board here found no decision "more directly relevant" than *Nelson*, nevertheless the examiner, board nd solicitor all seek to distinguish it, urging that this court "evidently felt" that at least some of the products which could be made using Nelson's compounds as intermediates would be final products usable with no experimentation for specific therapeutic end purposes. The court did not intend *Nelson* to have the narrow scope attributed to it by the Patent Office. The most the court knew about what could be done with Nelson's C-19 14-hydroxy androstenes was that

*In re Nelson,* 47 CCPA 1031, 280 F.2d 172, 126 USPQ 242. They urge that the present disclosure with respect to the usefulness of the claimed compounds as intermediates "is on all fours" with that in *Nelson.* In their view, the examiner's requirement for disclosure of a use of the final products produced by carrying out the known process on the novel intermediates of the claims "is an absurdity" in view of *Nelson* and the further decisions of this court in *In re Wilke,* 50 CCPA 964, 314 F.2d 558, 136 USPQ 435; *In re Adams;* and *In re Manson,* 52 CCPA 739, 333 F.2d 234, 142 USPQ 35. They look upon the latter decisions as carrying forward the principle expressed in *Nelson* that, in their words, "there is no necessity for a specification to teach the use of an end product where such end product is not the invention claimed, but merely the result thereof."

The decision in *Nelson* might well control here—*if* that decision were still a viable precedent. The question re-

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they could be used as intermediates to produce "steroids of a class at least some members of which are known to have useful therapeutic properties." The court took that as no guarantee that any of the *particular* "final products" which might be produced from Nelson's *particular* intermediates themselves would have the cardiac glycoside activity of other members of the class. As appellants correctly note in their brief:

> In the *Nelson* case, one skilled in the art could not exactly predict what therapeutic properties the end products produced by the use of the claimed intermediates might have, nor could they predict that they would possess any at all. * * *

Appellants, however, also urge that their intermediates are "useful" substances even under the Patent Office interpretation of *Nelson.* They contend that the 6-methyl aromatic steroids produced from their claimed compounds *are* members of a class of aromatic estrogen compounds, some of which are useful commercially. They refer specifically to certain members of that class in their brief. But appellants have not disclosed or otherwise shown that *any* 6-methyl aromatic steroid which can be produced from their intermediates possesses activities in common with those commercial members of the aromatic steroid series. We cannot accept their arguments for reasons given under Part I of this opinion.

mains, however, whether the majority view in *Nelson*—that steroid chemical compounds may be useful under § 101 if they are useful to chemists doing research on steroids and can be used to produce steroids which are members of a general class some members of which are known to have useful therapeutic properties—can possibly remain the law in view of *Brenner* v. *Manson*.

There the Supreme Court, in considering what renders a process useful under § 101, discussed the cases cited by appellants here, stating (all emphasis supplied):

> As is so often the case, however, a simple, everyday word [useful] can be pregnant with ambiguity when applied to the facts of life. That this is so is demonstrated by the *present conflict between the Patent Office and the CCPA* over how the test is to be applied to a chemical process which yields an already known product whose utility—*other than as a possible object of scientific inquiry*—has not yet been evidenced. It was not long ago that agency and court seemed of one mind on the question. In *Application of Bremner*, 37 C.C.P.A. (Pat.) 1032, 1034, 182 F.2d 216, 217, the court affirmed rejection by the Patent Office of both process and product claims. It noted that "no use for the products claimed to be developed by the processes had been shown in the specification." It held that "It was never intended that a patent be granted upon a product, or a process producing a product, unless such product be useful." Nor was this new doctrine in the court. See *Thomas* v. *Michael*, 35 C.C.P.A. (Pat.) 1036, 1038-1039, 166 F.2d 944, 946-947.
>
> The Patent Office has remained steadfast in this view. The CCPA, however, has moved sharply away from *Bremner*. The trend began in *Application of Nelson*, 47 C.C.P.A. (Pat.) 1031, 280 F.2d 172. There, the court reversed the Patent Office's rejection of a claim on a process [product] yielding chemical intermediates

"useful to chemists doing research on steroids," *despite the absence of evidence that any of the steroids thus ultimately produced were themselves "useful."* The *trend has accelerated,*[10] *culminating in* the present case where the court held it sufficient that a process produces the result intended and is not "detrimental to the public interest." 52 C.C.P.A. (Pat.) at 745, 333 F.2d at 238.

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[10] In a footnote to the above comments, the Court added:

> Thus,, in *Application of Wilke,* 50 C.C.P.A. (Pat.) 964, 314 F.2d 558, the court reversed a Patent Office denial of a process claim, holding that 35 U.S.C. § 112 (1964 ed.) was satisfied even though the specification recited only the manner in which the process was to be used and not any use for the products thereby yielded. See also *Application of Adams,* 50 C.C.P.A. (Pat.) 1185, 316 F.2d 476.
>
> In *Application of Szwarc,* 50 C.C.P.A. (Pat.) 1571, 319 F.2d 277, the *court acknowledged* that *its view of the law respecting utility of chemical processes had changed since Bremner.* * * * (Emphasis supplied)

Stripped of the highly technical procedural differences, the basic issue here, as in *Brenner* v. *Manson,* is whether the burden resting on an applicant to show that his invention is useful within the requirements of § 101 has been satisfied. While Manson did not disclose any use at all for the steroid compounds produced by his process, the arguments he advanced as to why those compounds were useful under § 101 correspond in substantial measure to the disclosure of the specification and the arguments relied on here. There can be no doubt that the insubstantial, superficial nature of vague, general disclosures or arguments of "useful in research" or "useful as building blocks of value to the researcher" was recognized, and clearly rejected, by the Supreme Court:

> Whatever weight is attached to the value of encouraging disclosure and of inhibiting secrecy, *we believe*

*a more compelling consideration is that a process patent in the chemical field, which has not been developed and pointed to the degree of specific utility,* creates a monopoly of knowledge which should be granted *only* if clearly commanded by the statute. * * * The basic *quid pro quo* contemplated by the Constitution and the Congress for granting a patent monopoly is the benefit derived by the public from an invention with substantial utility. Unless and until a process is refined and developed to this point—where specific benefit exists in currently available form—there is insufficient justification for permitting an applicant to engross what may prove to be a broad field.

*These arguments* for and against the patentability of a *process* which either *has no known use* or is *useful only in the sense that it may be an object of scientific research* would *apply equally* to the patenting of the *product produced by the process.* Respondent appears to concede that with respect to a product, as opposed to a process, Congress has struck the balance on the side of nonpatentability unless "utility" is shown. Indeed, the decisions of the CCPA are in accord with the view that a product may not be patented absent a showing of utility greater than any adduced in the present case. *We find absolutely no warrant for the proposition that although Congress intended that no patent be granted on a chemical compound whose sole "utility" consists of its potential role as an object of use-testing,* a different set of rules was meant to apply to the process which yielded the unpatentable product. *That proposition seems to us little more than an attempt to evade the impact of the rules which concededly govern patentability of the product itself.* (Emphasis supplied)

Wholly aside from the controlling impact of that reasoning here, the conclusion is inescapable that, just as the

practical utility of the compound produced by a chemical process "is an essential element" in establishing patentability of the process, 383 U.S. 519, so the practical utility of the compound, or compounds, produced from a chemical "intermediate," the "starting material" in such a process, is an essential element in establishing patentability of that intermediate. It seems clear that, if a process for producing a product of only conjectural use is not itself "useful" within § 101, it cannot be said that the starting materials for such a process—i.e., the presently claimed intermediates —are "useful." It is not enough that the specification disclose that the intermediate exists and that it "works," reacts, or can be used to produce some intended product of no known use. Nor is it enough that the product disclosed to be obtained from the intermediate belongs to some class of compounds which now is, or in the future might be, the subject of research to determine some specific use.[11] Cf. *Reiners* v. *Mehltretter*, 43 CCPA 1019, 1026, 236 F.2d 418, 421, 111 USPQ 97, 100, where compounds employed as intermediates to produce other *directly* useful compounds were found to be themselves useful.

It is impossible to reconcile the reasoning and conclusion of the majority in *Nelson, Wilke, Adams* and *Szwarc* with the majority view in *Brenner* v. *Manson*. Therefore, to the extent that those decisions are inconsistent with *Brenner* v. *Manson* and the views expressed herein, they must be, and are, overruled.

The decision is *affirmed*.

AFFIRMED.

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[11] It does not appear that appellants seriously disagree with us on the matter, for in their memorandum on reargument they state:

> C. By analogy between a process for production of a product and an intermediate for producing an end product, such intermediate would not be useful within the meaning of 35 U.S.C. 101 merely because it can be used to make the intended product, or because the end product belongs to a class of compounds now the subject of serious scientific investigation.

UNITED STATES COURT OF CUSTOMS AND PATENT APPEALS

October Term, 1966

Patent Appeal No. 7522

Serial No. 796,749

IN THE MATTER OF THE APPLICATION

OF

DAVID NEVILLE KIRK AND VLADIMIR PETROW

March 16, 1967

RICH, Judge.

**Notice of Forthcoming Dissenting Opinion**

I, like Judge Smith, whose sentiments I share, am now revising a dissenting opinion to cover this case and the companion *Joly* case (No. 7472), argued together December 5, 1966, and involving similar issues. I initially filed my tentative dissenting opinion herein February 1 in response to the December 22 majority opinion and a January 24 opinion in *Joly*. Thereafter the majority opinion in *Joly* was 75% rewritten on February 8 and again, on February 20, its content, responsive in part to observations in my dissent, was reduced 50%. In the ensuing three weeks the court has conferred on a long agenda of cases and held a week of hearings March 6-10, upon the conclusion of which I resumed, on March 13, my revision of the dissent. On that day notice was given by the Chief Judge that these two cases "will go down Thursday, March 16."

Protest to the arbitrary use of assumed power having proved futile, this unprecedented display of unseemly haste, condoned by the majority, necessitates this notice.

UNITED STATES COURT OF CUSTOMS AND PATENT APPEALS

October Term, 1966

Patent Appeal No. 7522

Serial No. 796,749

IN THE MATTER OF THE APPLICATION

OF

DAVID NEVILLE KIRK AND VLADIMIR PETROW

March 16, 1967

SMITH, Judge, dissenting.

Our usual practice is to release the majority opinion simultaneously with any dissenting opinions. There has been an unwarranted departure from this procedure in this case, the effect of which is to preclude an expression of my views at this time. I am unable to see wherein the cause of justice is served by such an irregular procedure. This dissent is therefore 1) a protest to the procedure here adopted, and 2) a notice that my full written dissent will be forthcoming as soon as the pressures of court work permit.

UNITED STATES COURT OF CUSTOMS AND PATENT APPEALS

October Term, 1966

Patent Appeal No. 7522

Serial No. 796,749

IN THE MATTER OF THE APPLICATION

OF

DAVID NEVILLE KIRK AND VLADIMIR PETROW

March 16, 1967

WORLEY, Chief Judge, specially concurring.

It is most regrettable that for the first time in the history of this court, the usual orderly processes of the court have been ignored by a minority.

The instant appeal was *re-argued* December 5, 1966. The majority opinion was circulated December 22 in its present form. Yet, now, nearly three months later, the dissenting opinions are not available and no valid excuse is given.

It would seem that if the majority can direct its time and attention to expediting the work of the court it should not be too much to expect the same diligence from the minority.

It should not be necessary to say that the duty of this court is to the litigants, applicants for patents, the Patent Office and the public—not to the possible whims and caprices of individual judges. It is impossible to discharge that duty by condoning the instant derelictions, which hereafter will not be countenanced.

UNITED STATES COURT OF CUSTOMS AND PATENT APPEALS

October Term, 1966

Patent Appeal No. 7472

Serial No. 81,272

IN THE MATTER OF THE APPLICATION
OF
ROBERT JOLY AND JULIEN WARNANT

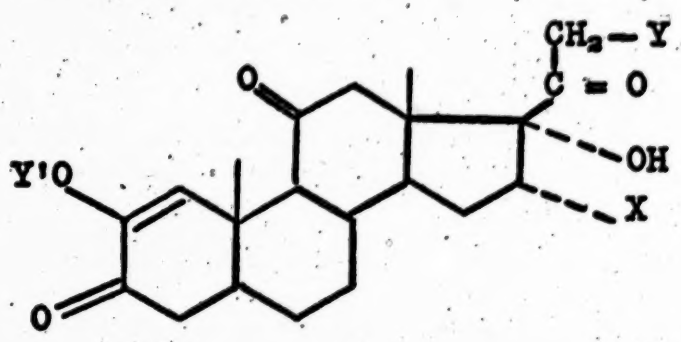
March 16, 1967

ALMOND, Judge.

This is an appeal from the decision of the Board of Appeals affirming the rejection of product claims 1 to 3 and process claims 8 to 12 of appellants' application serial No. 81,272, filed January 9, 1961, entitled "Esters of 2-Enols of $\Delta^1$ Steroids and Preparation Thereof."

Generic product claim 1 is illustrative:

1. A compound having the formula




wherein X is selected from the group consisting of hydrogen and methyl, Y is selected from the group consisting of hydrogen and an acyloxy radical of a lower organic carboxylic acid having 1 to 7 carbon atoms and Y' is an acyl radical of a lower organic carboxylic acid having 1 to 7 carbon atoms.

Composition of matter claims 2 and 3 are directed to specific compounds, 2,21-diacetoxy-$\Delta^1$-pregnene-17$\alpha$-ol-3,11,20-trione and 2-acetoxy-16$\alpha$-methyl-$\Delta^1$-pregnene-17$\alpha$-ol-3,11,20-trione, respectively. Claims 8 to 12 are directed to a process for the manufacture of the claimed steroids, which appellants disclose in their specification to be "useful as intermediates" in the following terms:

> The products obtained by the invention, the lower organic carboxylic acid esters of enols in the 2-position of $\Delta^1$-steroids, are particularly useful as intermediates in the preparation of steroids, especially steroids having a ketone group in the 2-position, such as 21-acetoxy-pregnane-17$\alpha$-ol-2,3,11,20-tetraone and 16$\alpha$-methyl-pregnane-17$\alpha$-ol-2,3,11,20-tetraone by acid hydrolysis and customary separation steps.

The Board of Appeals rejected all claims for appellants' failure to satisfy the requirements of 35 USC 101 and 112. Here, as in *In re Kirk*, 54 CCPA , F.2d , USPQ , decided concurrently, we are primarily concerned with the adequacy in law of the aforementioned assertions of usefulness in appellants' original application. Here, too, we are particularly concerned with the applicability of the decision of the Supreme Court in *Brenner* v. *Manson*, 383 U.S. 519, 148 USPQ 689, to the present facts.[1]

In their memorandum on reargument, appellants concede that, in view of *Brenner* v. *Manson*, the appealed process claims should not be found allowable unless we find the claimed compounds produced by that process to

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[1] This appeal was originally argued October 8, 1965, some five months prior to the decision in *Brenner* v. *Manson* on March 21, 1966. On November 10, 1966, this court restored the appeal to the calendar for reargument, and requested counsel to file memoranda "on the effect, if any, of *Brenner* v. *Manson* * * * on this appeal." Argument on that question was heard December 5, 1966.

be "useful" under section 101. It is to that issue that we direct our attention.

The examiner finally rejected all claims for "insufficient disclosure of utility." Analyzing the above disclosure in appellants' specification, he stated:

> * * * the applicants have stated only that the [claimed] final products may be converted to the corresponding 2-keto compounds, *which compounds have no known utility.* * * * [Emphasis supplied.]

The board agreed, adding:

> The portion of the specification * * * show that the claimed compounds can be used to prepare the corresponding 2,3-keto compounds. *Having arrived at that point, what has been accomplished?* Appellants do not assert that the latter compounds have known utility * * *.
>
> * * * * *
>
> * * * such conversion does not constitute a disclosure of utility for the claimed compounds because there is no disclosed utility nor any indication of a known utility for the 2,3-keto derivatives. *A useless product does not become useful by virtue of conversion into another useless product.* [Emphasis supplied.]

Appellants do not contend that a use for the claimed compounds, other than as starting materials or intermediates in a process of making other compounds, was either known or obvious to one of ordinary skill in the art at the time their application was filed. Rather, they urge that the claimed esters are "useful as intermediates" in the preparation of certain 2,3-diketo steroids. Although appellants admit that "no specific utility is stated" for the

two named 2,3-diketo steroids[2] which can be produced from the compounds of claims 2 and 3, they contend that those diketo compounds are "closely related" in chemical structure to compounds of known usefulness, viz, cortisone and prednisone. Appellants argue that "[t]he disclosure of a steroid as useful as an intermediate to make other steroids by specific disclosed reactions is an adequate disclosure of utility."

We do not accept those arguments. There is no evidence of record that the particular 2,3-diketo steroids which can be obtained from the claimed compounds possess *properties* or *activities* in common with the allegedly "closely related" compounds having known useful properties, cortisone and prednisone. Similar arguments were presented to, and rejected by, the Supreme Court in *Brenner* v. *Manson,* 383 U.S. at 531-2, and this court in *In re Kirk* where we stated:

> It cannot be presumed that a *steroid* chemical compound is "useful" under § 101, or that one of skill in

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[2] In a letter dated April 6, 1962, appellants urged before the Patent Office that the 2,3-diketo steroids in turn "are known to be useful in the formation of A-nor steroids." Insofar as the record shows, no evidence or argument was presented at that time or any other time in the proceedings below that any "A-nor steroid" which might ultimately be produced from the claimed compounds would itself be a useful product, the board noting:

> * * * there is nothing to indicate that the derivative dicarboxylic acid compounds or the ultimate A-nor compounds have any utility. * * *

Appellants argue here that the particular 2,3-diketo steroid which is prepared from the compound of claim 2 can itself be used to prepare a compound of "recognized therapeutic activity," A-nor cortisone. They rely on certain documentary material in their brief, not part of the evidence before the Patent Office, to support the proposition that A-nor cortisone, known to be useful at the time of filing their application, can be prepared from the claimed compounds. We have not considered that "evidence." See *In re Cofer,* 53 CCPA 830, 354 F. 2d 664, 148 USPQ 268.

> the art will know "how to use" it, simply because the compound is closely related only in a structural sense to other steroid compounds known to be useful.
> * * *

Nor do we agree that the mere disclosure that a claimed chemical compound may be used as an intermediate to make other compounds, *without regard* for the usefulness of the latter compounds, is adequate under section 101. As we stated in *In re Kirk:*

> * * * the conclusion is inescapable that, just as the practical utility of the compound produced by a chemical process "is an essential element" in establishing patentability of the process, [*Brenner* v. *Manson*] 383 U.S. 519, so the practical utility of the compound, or compounds, produced from a chemical "intermediate," the "starting material" in such a process, is an essential element in establishing patentability of that intermediate. It seems clear that, if a process for producing a product of only conjectural use is not itself "useful" within § 101, it cannot be said that the starting materials for such a process—i.e., the presently claimed intermediates—are "useful." It is not enough that the specification disclose that the intermediate exists and that it "works," reacts, or can be used to produce some intended product of no known use. Nor is it enough that the product disclosed to be obtained from the intermediate belongs to some class of compounds which now is, or in the future might be, the subject of research to determine some specific use. * * *

We conclude that appellants have not discharged their burden to show that the claimed subject matter is "useful" within the requirements of section 101.

The decision is *affirmed.*

AFFIRMED.

UNITED STATES COURT OF CUSTOMS AND PATENT APPEALS

October Term, 1966.

Patent Appeal No. 7472.

Serial No. 81,272.

IN THE MATTER OF THE APPLICATION

OF

ROBERT JOLY AND JULIEN WARNANT

March 16, 1967

RICH, Judge.

**Notice of Forthcoming Dissenting Opinion**

I, like Judge Smith, whose sentiments I share, am now revising a dissenting opinion to cover this case and the companion Kirk case (No. 7522), argued together December 5, 1966, and involving similar issues. I initially filed my tentative dissenting opinion in *Kirk* February 1 in response to a December 22 majority opinion therein and a January 24 opinion herein. Thereafter the majority opinion herein was 75% rewritten on February 8 and again, on February 20, its content, responsive in part to observations in my dissent, was reduced 50%. In the ensuing three weeks the court has conferred on a long agenda of cases and held a week of hearings March 6-10, upon the conclusion of which I resumed, on March 13, my revision of the dissent. On that day notice was given by the Chief Judge that these two cases "will go down Thursday, March 16."

Protest to the arbitrary use of assumed power having proved futile, this unprecedented display of unseemly haste, condoned by the majority, necessitates this notice.

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SMITH, Judge, dissenting.

Our usual practice is to release the majority opinion simultaneously with any dissenting opinions. There has been an unwarranted departure from this procedure in this case, the effect of which is to preclude an expression of my views at this time. I am unable to see wherein the cause of justice is served by such an irregular procedure. This dissent is therefore 1) a protest to the procedure here adopted, and 2) a notice that my full written dissent will be forthcoming as soon as the pressures of court work permit.

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March 16, 1967

WORLEY, Chief Judge, specially concurring.

It is most regrettable that for the first time in the history of this court, the usual orderly processes of the court have been ignored by a minority.

The instant appeal was *re-argued* December 5, 1966. The majority opinion was circulated February 20 in its present form. Yet, now, nearly one month later, the dissenting opinions are not available and no valid excuse is given.

It would seem that if the majority can direct its time and attention to expediting the work of the court it should not be too much to expect the same diligence from the minority.

It should not be necessary to say that the duty of this court is to the litigants, applicants for patents, the Patent Office and the public—not to the possible whims and caprices of individual judges. It is impossible to discharge that duty by condoning the instant derelictions, which hereafter will not be countenanced.